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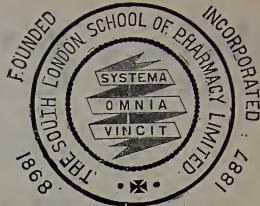
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WANTED, by January, qualified Assistant. Apply, stating age helght, salary, and references, enclosing carte, if convenient, to Frost, Beeston, Notts.

BY the end of December, a Justier Assistant or Improver. Apply, statiog age, salary required, &c., and glving references, to J. H. Adams & Co., Stoke-upon-Trent.

BY first week in January, good Junior; 19 to 21. Applications, with full particulars and name of reference, and carte, to S., 54 High Street, Stroud, Gloucestersbire.

A N experienced Assistant wanted; must be a good Dispeaser and Salesman, aged 25 to 30, steady, and with unexceptionable referenezs; indoors. Apply, Fripp & Oo. (late Grindley), Chester.

WANTED, in January, young, qualified Assistant, to take almost sole management of recently established Branch; Indoors. Apply, with references, and state salary required, to Bell, Stapleford, Notts.

JUNIOR; indoors: for Branch Cash Busioess; must be well np lu Counter Work and Stock. Apply, with full particulars, to Lewis's Drug Stores, 22 and 24 Great Portland Street. W. Also competent Dispenser

WANTED. Branch Mauager; qualified; Light Petail, Dispensing, &c.; aged about 30; outdoors. Apply, with carte, giving references. &c, state salary expected, to "Touic," care of Evaus, Sons & Co., 56 Hanover Street, Liverpool.

OUTDOORS.—An Assistant, qualified Prescriber and Extractor, with or without view to Partnership, in a large town in the Eastern Counties. Apply, stating age, salary, &c., to "Ihex," Davy, Yates, & Routledge, 64 Park Street, Southwark.

WANTED, for the Hills in India, a thoroughly practical Pharmacentical Chemist, to take charge of Discensary; must be a single man, and one who understands the manufacture of accated waters. Apply, with qualifications and full particulars, F. L., 14 St. Mary Axe, E.C.

WANTED, hy a firm of Manufacturing Chemists, a first-class Laboratory Manager; must be fully qualified; a good salary will be given to an efficient man. Apply, hy letter, giving full particulars and ecclosing references, to X. Y. Z., care of Messrs. Horner & Sons, Mitre Square,

WANTED, good Junior Assistant, for Mixed business; indoors; unexceptionable references required; good Counterman and Dispenser. Protestaut and abstainer preferred. State experience, age, height, and salary required, with photo (to be returned), to J. B., 32 Victoria Road, Winnes.

FRANCE (BIARRITZ),—At once, a good English Assistant, well up in his business; state age, where last employed, hight, salary required, &c: preference given to one who will engage for 3 years; passage paid there and back. Apply by letter to London Dispensary, 19 Rue Mazagran, Biarritz.

Competent Junior, ag d about 24; able to take entire charge, when required, of light-class business; must be a good stockkeeper; preference given to one seeking a permanency, in or out doors. Give salary, height, and all particulars, to "Ammon," Messrs. Hoogkinsous & Co., 101 Whitecross Street, E.C.

WANTED, about January 1, active Junior Assistant, of obliging business habits, for Drug Stores; state aga, experience, and salary required (outdoors), and references, weekly half-holday. Sunday work one hour a fortright. Send proto, if practicable (to be returned), to Arthur Oglesby, Chemist, Barusley.

WANTED, for January, experienced, energetic Manager (qualified); one accustomed to a Mixed Country Drug and Oil Store; must be a good dispenser and prescriber; good salary with interest in prefits will be given to a suitable applicant. Apply with references, stating wages required, to F. W. Bradley, Pho Castle, Wisbech, Cambs.

A Tooce, an Assistant (indoors), about 21 to 23, in good-class Country husiness; must be good Dispenser and Counterman; no Sunday or night duty; hours 8 to 8 and weekly balf holiday, with comfortable home. Apply, giving full particulars as to experience, references, and salary required, to Thomas Handley, 14 Market Place, Loughborough.

QUALIFIED Assistant; one able to converse in French, or French and German preferred; ontdoors: 3 kept; liberal progressive salary to smart busioess man seeking a permanency. Apply, personally if possible, between 3 and 4 P.M., applications not asswered in three days declined, J. B. Hay & Co., International Chemists, 8 Coventry Street, Piecadlly, London, W.

WANTED, Travellers representing good house, who call on first-class Chemists and Druggists in the country, and are allowed to take up a commission, to take orders for Dispensing and other Bottles; first class make. low prices, no serious loss of time, no heavy samples; good terms to able men. Letters to be addressed to "Coufidence," Office of The CHEMIST AND DRUGGIST, 42 Cannon Street, E.C., before end of December. Full particulars of present line and district, as well as highest references, absolutely necessary.

JUNIOR —Hamilton, Long & Co. (Lim.), State Apothecaries, Dubliu, require a Junior Assistant (indoors); hours liberal. Apply, erclosing carte and stating age, height, experience, and salary expected, to Dr. Hamilton, 3 Lower Suckville Street, Dublin.

ANCHESTER and Salford Provident Dispensarios Association.—
Applications are invited from duly qualified registered Dispensers (married) for the post of Dispensor to the Gorton and Openshaw Branch of this Association. The person appointed will be furnished with rouldence, coal, and gas, and will be required to undertake also the duties of collector; salary and commission, commencing with £80 per annum. Apply, by letter only, with reference and full particulars, to-Charge Behrens, Esq., 36 Princess Street, Manchester.

TO DISPENSERS.—Required, for the prison service, Compounders of Medicines; candidates must hold a diploma of the Pharmaceutical Society; ago 24 to 35; catary £120 per aunnm, rising by £2 per annum to £140, with uniform, and medical attendance and medicines; personal application, with satisfactory testimonials of recent date, from responsible persons, should be made to the Governor of the nearest prison in England or Wales, who will furnish information as to the nature of the duties, &c.; candidates residing in or near London should apply to the Governor of H.M. Prison, Wandsworth; no travelling or other expenses will be allowed; no person whose health, character, and past enreer will not bear the most rigid investigation need apply.

SITUATIONS WANTED.

1s. for twelve words; 6d. for every six words beyond.

ANAGER, temporary, during Christmas vncation; qualified. A. B., 58 High Street, Grays; Essex.

A SSISTANT (indoors), London; nostaiuer; good reference; height, 5 it. 10 in. "Ferrum," 46 Parson's Mead, Oroydon.

ASSISTANT; London Branch Manager 4 years; study employer's intercet. Lee, 1 Stanley Street, Paddington, W.

A SSISTANT; West-end experience; unexceptionable references; London preferred. Hughes, 3 Methley Street, Kenungton.

AFTER Christmas, Assistant in good-class Retail and Dispensing; aged 24; reference. "Exalgine," 15 George Street, Driffield, Yorke.

TO TRAVEL. — Situation wanted by energetic and experienced Ohemist. J. M., care of Mrs. Rowley, Victoria Road, New Brighton.

EARLY in January; Dispenser; town preferred; aged 21; 7 years' experience; state particulars. Trimmer, Bishop Middleham, Ferry Hill.

A SSISTANT; immediately; aged 22; experienced; indoors; good references. Particulars to "Chemicus," 50 St. Leonard'e Rond, Popiar, E.

INOR Man (practical), in Laboratory or with Surgeon; time for reading necessary. Address J. L. Hallnweii, 63 Wood Street,

TEMPORARY; town and country experience; reliable; undeniable reterence; registered; now disengaged. "Chemist," 13 Southampton Street, London, N.

CHEMIST (qualified), open to immediate engagement as Branch Manager or Temporary; good references. "Chemist," 8 Ohelsea Road, Southsea, Hants.

A SSISTANT; 13 years' town and country experience; Prescriber, Extractor; outdoors preferred. "Statim," Shephard, Pharmaceutical Chemist, Ripley, Derby.

R. S. SMITH, 6 Shaftesbury Terrace, Ashley Road, Bristol, takes Confidential Management during absence or illness; varied experience; distance no consequence.

WHOLESALE.—Advertiser seeks re-engagement at Wet or Dry Counter; 12 years' experience. A. B., Office of The Chemist and Druggist, 42 Cannon Street, E.C.

TEMPORARY Manager or Assistant; country preferred; qualified; thoroughly experienced; steady and reliable; highest references. "Extractor," 86 Florence Road, London, S.E.

SITUATION wanted, in good English houso, as Assistant or Dispenser, by a Belglan gentleman; good knowledge of drugs and electricity; aged 32 Apply, Minguet, 312 Rue Marcadot, Paris.

WHOLESALE.—Traveller with sound connection (Drugs and Preparations) wants engagement; remuneration by commission. "Energy," Office of The Chemist and Druggist, 42 Oannon Street, E.C.

ONDON or Suburban district.—Qualified Chemist, of good address and appearance, seeks eogagement after Christmas in good-class business, with a view to an early purchase of the same; not profit about £400 per annum; cond fide sale; no agents. James Purcell, Chemist, Acaela Villa, 223 Burrage Road, Plumstead, Kent.

PART-11ME; disengaged; well np. J., 2 Bridport Street, Blandford Square, w

PART-TIME or otherwise, for one month. "Student," 35 Trinity Square, Borough, S.E.

JUNIOR or Improver; age 1 20; disengaged. "Chemist," 23 Jerdan Flace, Walnam Green.

MPROVER or Turnover in Drug and Grocery Business. X., Sambrook, Newport, Salop.

ANALY ICA Chemist or Assistant in Laboratory or Works. F.C.S., 3 Mortlake Terrace, Kew.

OCUM TaNENS; qualified; experienced; disengaged December 7 to 29. "Chemicus," Pendice, St. Clears.

ENGAGEMENT wanted by Junior until 30th December; first-class references. M, 9 Elm Road, Beekenham.

A SSISTANT; aged 23; experienced; tall; outdoors. Particulars to W. P., Five Caken, Mortimer, Berks.

AS Locum-Tenens; aged 35; qualified; disengaged till December 24. "Chemicus," Sand Gate Villa, Paignton.

ANAGER.—Wanted, situation in January; north of England preferred; 10 years' good experience. Wilkie, 39 Orford St., Ipswich.

IVERPOOL.—Wholesale preferred; 6 years' Retail experience; first-class reference; aged 21. D. H., 131 Ohestergate, Macclesfield.

AS Assistant or Branch Manager (ontdoors); experienced; good Prescriber; excellent references. "Veritas," 29 Queen Street, Scarborough.

MANAGER, Senior, or Hospital Dispenser; married; Minor; registered Dentist; 6½ years' reference. "Chemist," 188 Strand Road, Bootle, Liverpool.

ALF-TIME Assistantship on reciprocal terms, or as D.spenser to Surgeon; aged 26; experienced; good references. "Student," 8 Lamb'e Conduit Street, W.O.

A SSISTANT, unqualified, with first class experience, many years in best houses, highest references, wishes for simution where thorough business-like qualities would be appreciated; at liberty shortly. A., 26 Vernon Road, Leeds.

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Special charges are made for Advertisements under this heading which can be obtained on application.

To Medicos possessing a non-secret Novelty, Invention or Patent in Pharmacy, Surgery, &c., in which there is a fair prospect for capital to be invested advantageously. Send particulars of purchase (specimen where praction) to "Oapitalist," Box 777, Sell's Advertising Offices, London

YOUNG Phnrmacist, German, speaking French and a little English, seeks a situation in London by 1st April 1891. or earlier.

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Bern (Switzerland).

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PRELIMINARY.—Arithmetic and Metric System, 1s. How to Write nu Essay, 3d. Caesar Simplified, 1s. Knotty Points in Latin Grammar, 1s. 6d. Minon.—Equations Simplified, 1s. Illegible Autographic Prescriptions, 1s. Notes on Dispensing, 1s. Prescriptions given at the Minor, 6d. "Chemist," oare of Mr. J. Edwards, Wye, Keut.

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In Packets, 6d. and 1s. Rotail. 3s. 9d. and 7s. 6d. per dozen Wholesale,
Full dozen post free.

DIAMOND POWDER FOR THE HAIR.

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Is a specially prepared volatile essence, distilled from a particular variety of pine, growing nearest the snow level on the Alps. It possesses exceptional medicinal properties when given internally, or in the form of inhalations, in the treatment of Pulmonary and Diathetic Affections, such as Phthisis, Rheumatism, Gout, &c. It is a valuable deodorizer and disinfectant, and has a peculiarly refreshing and fragrant odour.

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For Sore Throat, Cough, Hoarseness, &c., they give immediate relief.

Specially beneficial for use in Chronic Rheumatism. Gout. Lumbago, Sciatica, &c. It is also invaluable for Throat and Chest Affections, and may be taken internally, in doses of 2 to 5 drops.

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For all Skin Affections, Irritations, Insect Bite:, Burns, &c. This Ointment is a fine smooth homogeneous application. It gives immediate relief in the intolerable itching of Eczema, &c. It is unrivalled both as a medicinal agent and toilet requisite.

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Is a carefully neutralised superfatted Soap, containing no free alkali, and is a Lubricant instead of a Desiccant to the skin. It is peculiarly adapted for use to the delicate skin of ladies and children. It leaves the skin smooth and satiny, and beautifies the complexion. The "Pumiline" Essence which it contains makes it a powerful disinfectant.

Most effective and convenient pocket inhaler for use in Throat or Lung Troubles. Is invaluable for use during a fog or mist.

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For use in Otorrhœa and all Aural Disorders. Prepared according to Dr. WARD COUSINS' Formula. In boxes, 1/6 each.

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PRICES-"PUMILINE" ESSENCE...... 1/6 and 2/6 per bottle...... 15/ and 24/ per dozen. "PUMILINE" EXTRACT 1/ per bottle...... 9/ per dozen. "PUMILINE" JUJUBES...... 1/11 and 2/3 per box 10/6 and 20/ per dozen "PUMILINE" OINTMENT 1/1 and 2/9 per pot...... 11/ and 27/ per dozen. "PUMILINE" LINIMENT 1/13 and 2/9 per bottle 11/ and 27/ per dozen "FUMILINE" PLASTER 1/13 each 9/ per dozen. BESIDES WHICH AN ADDITIONAL DISCOUNT IS ALLOWED TO CHEMISTS AND THE TRADE.

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The Proprietors of Kearsley's Original Widow Welch's Female Pills find it incombent on them to caution the purchasers of these Pills against various imitations by parties who have no knowledge of their peculiar preparation, the Original Recipe having been sold to the late G. Kearsley, of Fleet Street, whose Widow found it necessary to make an affidavit, for the protection of her property, in the year 1798. The Genuine Recipe for Widow Welch's Female Pills has been prepared by them for 100 Years! Chemists are particularly requested to remark that, as a testimony of anthenticity, each bill of directions contains an affidavit, and bears the signature of "C. KEARSLEY," in writing, also engraved on the Government Stamp, and each bex is wrapped in WHITE paper.

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Made at low temper-ALKALINE ature from cheap (made fats, sugar, and Sine Spirit). strong lyes. Yellow. RESIN. Primrose. Usually Yellow Transparent. Kitchen Soap treated with SPIRIT methylated spirit, (Methylated). sugar, &c. (Rarely contain glycerine.) HARD SOAP (Soda). If not milled contains 20 to 45 per CURD Remelted and milled. cent. of water. Coloured with vermilion; red and chrome lead, Scheele's Medicated. (Tallow). green, or aniline dyes sometimes. BOILED SOAPS. (Madeatorabore MOTTLED NOTE.-Many of the Coloured with iron, watered, and heavily salted. 212° F.) ordinary Toilet Soaps of CASTILE. commerce are "doctored" with Soda Silicate, &c., to promote the incorpora-BROWN tion of a lot of water. Factory floor scrapings. Colour due to bad fats and brown WINDSOR. SOFT SOAP Scouring Soap. Shaving Cream. (Potash). SODA Liquid Soaps. **NOLIA" SHAVING SOAP** Shaving Soaps. POTASH) Some Toilet Soaps. (Hard). COLD **PROCESS** Milled.

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OLIA" SOAP.

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Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Incertions are charged at the rate of \$\frac{1}{2}\dots\$, per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays \$\frac{1}{2}\dots\$, per word, his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of The Chemist and Druggist, 42 Cannon Street, E.C.," and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as e.g., £1 10s. 6d.

DEPOSIT OF MONEY.—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us, accompanied by a commission of 6d. if the amount is £3 or under; and 1s. if over that snm. We acknowledge receipt of deposit to both parties, and hold the money until we are satisfied that either the goods are returned to their original owner or the purchase as completed.

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Quintity saleable patent medicires, good coudition, half retail price; send for list. T. H. Dodd, Market Place, Walsingham, Durham.

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- Reliable recipes, 6d. each; full set of 130 neatly capied in book, 7s. 6d.; send for list. "Chemist," Edwards, Wye, Kent.
- How to make concentrated aromatic waters, miscible with water, at balf-price; formula 1s. 6d. F. Horniblow, Sidbury, Worcoster.

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Second-hand shop-fittings, show-cases, shop-rounds, specie-jars, carboys, pill-machines, ntensils, and every necessary for chemists commencing or fitting up branch shops, at half the usual prices; state requirements or call. Natall & Co., 184 Aldersgate Street, London, nearly opposite Maw's.

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Surplus drugs at half wholesale prices; Tamners "Practice" wanted. Royse, Stockport.

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Microscopic slides, medical, educational, interesting, from 2s. 6d. per dozen; lists. B., 233 Maida Vale, W.

Wenham lamp, Class G, No. 2, cost 5 guineas; to be sold a barga'n; good as new. Carlton, Chemist, Peterborougb.

Printing-press, with type, &c., suitable for labels, good order, cost 81.; what offers? Glass, 46 Clerk Street, Edinburgh.

Six 100's choice cigars, 9s, cost 11s. 6d.); eight 50's 1887 cigars, 4s 3d.; six 50's fine foreign, 8s. 6d., cost 10s. 9d. Slater, Beeston Hill, Leeds.

Ninc dozen cardboard boxes, partitioned to hold 3' dozen 1 oz. vials; will take 1s. 6d. per dozen to clear; offers wanted for 100 Johannis seltzer water. Birkbeck, Chemist, Lincoln.

Job lots of mineral-water and other bottles:
100 gross split lemons; 50 gross 10-oz.
square dark coffee catracts; 30 gross
cherry braudy quarts; what offers to clear?
90/100.

Pill-piping machine, wrought-iron stand, gun metal cyliuder, brass head, five nozzles also tincture-press, gallon size complete, except cylinder; what offers? Particulars on application, Ede, 97 Downs Road, Clapton.

Ashworth's metallic comb brushes various sizes and kiuds, in quarter, half, one dozen, or larger lots, delivery free, at 20 per cent. off wholesale house net list prices; large stook to clear, all perfect: remittance with order. Wesley Jones, Llanelly.

2 specie-jars, 21 in. higb, 8c each, the 2 for 15 labe's worn; one ditto, 10c; shop-jars, tablets, &c.; medical books, list sent; also nearly new sewing - machine, genuine Wheeler & Wilson, New York, 50s. 112: Higb Street, South Woolwich.

WANTED.

- Clean fron cisterns for storing various oils, with taps: state on acity, diameter, and height. M Kee, Chemist, Tunstall, Staffs.
- Two dozen 48-oz. wide-month stoppered powder bottles Rackham, Upper Goat Lane, Norwieb.
- Beecham's, Brown's Chlorodyne, Seigel's Sequah's, and other saleable patents. Birkbeck, Chemist, Lincoln.
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- Compact glass 'sbow-case for exhibition purposes. Send sketch, full particulars and lowest price, to H. & Co., 28 High Street, Wandsworth.
- A complete set of "Year Book of Pbarmacy."

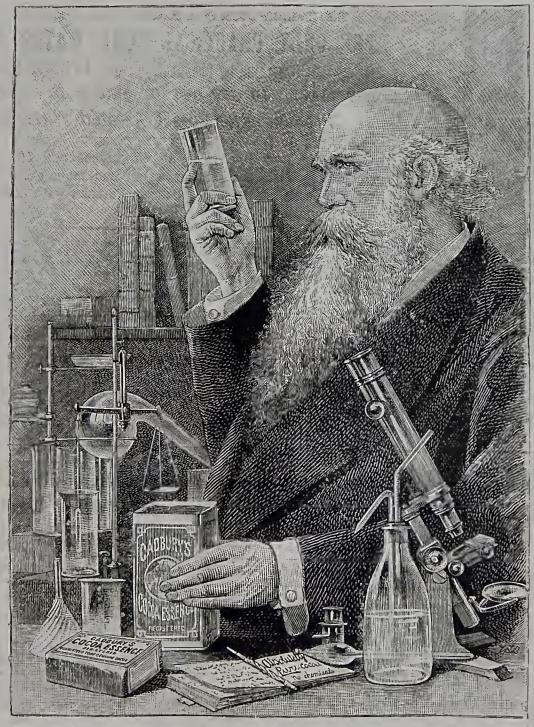
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Mrs. Beunett, who takes a quantity of liq. morph. byd. Casely, Cnemist, Camden Town.

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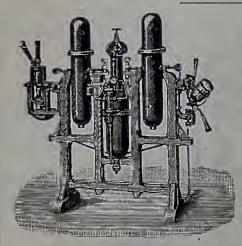
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THE ONLY PRACTICAL SODA WATER MACHINE.

Self-working by Chemical Action. No Skilled Labour. NOT LIABLE TO GET OUT OF ORDER OR NEED REPAIRS. Produces the Purest Aërated Water made.

Machines, in two sizes, at 25 guineas and 30 guineas. All complete. With the smaller a lad can make easily in ten hours twenty dozen Syphons or 100 dozen Bottles; with the larger, thirty dozen Syphons or 175 dozen bottles.

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I have examined during the present year the Machines for making Aërated Waters invented by Mr. Lozé, and I have formed a very high opinion of them. No lead is found in any part which comes in contact with the water, and the process is one which produces absolutely pure Carbonic Gas.

Accordingly I find that the effervescing water produced is free from every injurious metal or contamination, and has a better flavour than that produced in the ordinary way.

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Gentlemen,—At your request I have visited the works of Messrs. A. Lozé & Co., of Prescot Street and Tuehrook. Liverpool. I have inspected his patented Apparatus for producing Aërated Waters, and have analysed the Aërated drinks manufactured. The results of analysis quite justified the inferences which were drawn from a knowledge of the materials used. Thus, instead of using ordinary whiting (as the sources of exbonic acid gas), which gives off small quantities of offensive gases when acted upon with acid, Mr. Lozé uses one of the pure soluble hicarbenates of either Potash or Soda; the use of this sait enables the apparatus to he much simplified in form, as no gas washer is required, but the carbonic acid gas may be led at once into the liquid in the Saturating Cylinders. The Aërated drinks produced are of very high quality, both as to purity and as to Aëration, and the apparatus possesses the merit of extreme simplicity and efficiency.—Faithfully yours,

C. ESTCOURT, F.I.C., F.I.

Messrs. A. Lozé, & Co., Limited.

Dear Mr. Lozé,—I am pleased to inform you that I have been able to work the Machine sold to me by you without previous knowledge. With your patent Turnover I can bottle Patent Stoppers at the rate of two dozen per minute. Syphons and Corked Bottles I can fill much quickor than what you advertise the Machine to do.

The Aërated Waters produced have been sampled by a number of gentlemen, and pronounced by them to be of a most excellent quality.—Wishing you every success, I remain, yours truly,

ROBT. J. GOW, F.C.S.

MILLAR'S BRITISH WINES.

ORANGE (suitable for Quinine), GINGER, RAISIN COWSLIP, CHERRY, &c. A. MILLAR & CO., Thomas Street, DUBLIN.

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Or Improved CODD'S.

Is the most perfect Bottle in the market.

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Name on Bottles free for orders of 30 gross. Under that quantity Moulds charged 10s. for each size or shape.

Extra Rings, 1s. 6d. per Gross; printed with name of owner, 2a. per Gross extra.



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It is the cheapest, strongest, handsomest, and best in the World

Pure Block Tin Tops

PRICE 1/6 EACH.

Nickel-plating Tops from $1\frac{1}{2}d$. each. Silver - plating Tops from $3\frac{1}{2}\vec{a}$, each. Marking on Tops Free. Marking on Vases Free for orders of 1,000.

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BARNETT & FOSTER, 26T EAGLE WHARF ROAD, LONDON, N.

SYPHONS SELTZOGENES





PRICES.

SYPHONS ... 1/6 1/8 and 1/10 each. SELTZOGENES.

All our Seltzogenes are manufactured on the wellknown "Fevre" System, and each one is thoroughly tested before leaving our works.



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GUÉRET FRÈRES,

MACHINISTS, PATENTEES,

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SYPHONS WITH SHORT LEVER, with Metal Tops of Pure Tin, carefully mounted, and the glass of the first quality.

GAZOSELTZ, for the instantaneous production of Aërated Beverages at table.

Anyone can use them.

"CONTINUOUS PROCESS" Apparatus complete, guaranteed without flaw in construction, possessing perfect action, and tested to a high pressure, while

fulfilling every desirable condition of economy and sanitation.

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NEW PATENT

AIR-TIGHT CHEMIST JAR.

A slight turn of the knob presses the indiarubber Band against the glass, and renders the vessel absolutely air-tight. The Stopper is made of pure Nickel, of handsome shape.

INVALUABLE FOR SHOW BOTTLES, CHEMISTS, CONFECTIONERS, &c. Samples and Prices of all Chemists' Sundriesmen.

C. MIEILIN, 37 CRUTCHED FRIARS, MARK LANE, E.C.



Section of the Nickel Stopper when closed.

18



"MYRTLE GROVE" TOBACCO



TADDY & GO., 45 Minories, LONDON

In 1-oz., 2-oz., and 4-oz. Packets, and 1, 1, 1 lb. Tins only.

ESTABLISHED 150 YEARS,

SNUFF, TOBACCO, AND SEGAR MANUFACTURERS.

Write for List of Specialities.

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BROTHERS'

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MALT & HYPOPHOSPHITE BISCUITS

A palatable and convenient mode of administering Malt and the Hypophosphites.

The Biscuits contain 75 per cent. of Malt Flour to 25 per cent. prepared Wheaten Flour, and each Biscuit contains half a grain of the combined Hypophosphites of Lime, Potass, and Soda, thus rendering it an admirable tonic and nutritive Food, eminently adapted for those cases in which Malt and the Hypophosphites are specially indicated.

In Tins, 1s. 6d. and 3s. each; Trade Price, 15s. and 30s. dozen,

From the Patent Medicine Houses, or from the Patentees and Manufacturers,

READE BROTHERS & CO., Pharmaceutical WOLVERHAMPTON.

LONDON: 45 GIFFORD

STREET, N.

TRADE

HARROGATE. BRISTOL.

TOPS THE

TELEPHONE NO.

ONLY PRIZE MEDAL LONDON, 1881.

RAISED BY THE PERSISTENT ENERGY AND GREAT CARE OF CHEMISTS

	No. of	
Year	Members	Dividend
1878	119	None
1879	350	None
1880	430	None
1881	540	None
1882	615	32
1883	708	5

TELEGRAPHIC

Chemists Starbeck Harrogate



HIGHEST PRIZE MEDAL Telegraphic BRADFORD, 1882.

RUBINE

Address LONDON."

STRENGTHENED AND SUPPORTED BY THE APPROBATION OF THE MEDICAL PROFESSION

	No. of	
Year	Members	Dividend
-1884	903	6
1885	1,193	6
1886	1,463	6
1887	1,612	
1888		
1889	2,031	$7\frac{1}{2}$
1886 1887	1,463	

ADDRESSES

Chemists Sun Factory Bristo'.

INCREASE OF SALES.—The Sales for the Half-year ending March 31, 1890, show an increase of 30 per cent. over the corresponding period of previous year.

This Company manufactures the various descriptions of Mineral Waters of the highest class and of specified formula, and now numbers over 2,000 Members. Good Dividends.

	PRIC	ŒS.	To Control In
Carbonated Water Soda " 5 Grains to Soda " B.P. 15 " Potash " B.P. 15 " Seltzer	In Corked In Bots. Syphons.	Lime Juice Ginger Ale Ginger Beer, Glass Lithia, B.P., 5 grains to Half-pint Iron and Quinine Water Mineral Acid L; 6 dozen 5s. 6d. each. Empties a	In Corked In Syphons, 1/- 2/6 1/- 2/6 1/- 2/6 1/6 2/6 1/6

SYRUPS.

In 26-oz. bottles, handsomely labelled and capsuled. Raspberry, Strawberry, Cherry, Red Currant, Black Currant, Pine Apple, &c., 8/- per dozen. Lime Fruit Cordial, 8/- per dozen. Bottles charged 1/- per dozen, and allowed for on return.

A holder (Chemist) of £1 share is entitled to all the advantages of this Association.

SAMPLE CASE OF WATERS SENT FREE. Handbills with Name and Prices supplied gratis to Shareholders.

The Chemists' Aerated and Mineral Waters Association, Limited, BRISTOL. HARROGATE, LONDON.

EIGHT PRIZE MEDALS AWARDED

HOUSEHOLD SPECIALITIES

YORKSHIRE RELISH.

Most Delicious Sauce in the World. Bottles, 6d., 1s., and Es. each

GOODALL'S BAKING POWDER,

The Best in the World. Id. Packets; 8d., 1s., 2s. and 5s. Tins.

GOODALL'S EGO POWDER.

@no 6d. Tin is equal to 25 eggs. In 1d. Packets; 64., 1s. 2s and 5s. Tins.

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Delicious Custards without Eggs. In Boxes, 24, 6d., and 1s. sac

800DALL'S BLANGMANGE POWDER

Delicious Blancmange in a Few Minutes. Boxes, 6d. and lt. sach.

GOODALL'S QUININE WINE, B.P.

Best Tonic yet Introduced. Bottles, 6d., 1s. and 2s. each.

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Makes the Best Ginger-Beer. Packets, 3d. nd 8d.

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GOODALL'S LAVENDER WATER.

& Rich and Lasting Perfume. Bottles, 1s., 2s., and 5s. each.

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EROPRIETORS-GOODALL, BACKHOUSE & CO., LEEDS

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Monthly Price List of Patent Medicines, Druggists' Sundries &c., will be sent post free on application to

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Will be found of great value in the treatment of Anaemia, Chlorosis, Intermitting fever, Malaria, Diseases of the Nerves, &c.

HENRY MATTONI, VIENNA.

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To be had of all Chemists and Druggists.

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DE CARLE'S WINTER BEVERAGES

Prepared from Fruit, combined with warm aromatics, making a delicious invigorating drink for the Festive Season, Evening Parties, Children's Gatherings, &c.

MAY BE USED WITH HOT OR COLD WATER.

Flavours—Clove, Peppermint, Ginger Punch, Ginger Lemon, Raspberry, Lemonade, Black
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ONE PACKET MAKES 11 PINT BY THE ADDITION OF SUGAR AND WATER,

Retail at 4½d. each.

Good supply of Handbills sent with each order.

Order a 3-dozen Case, which we will send Carriage Paid for 10/-

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NORWICH.

Sole Manufacturers of

DE CARLE'S SOLID FRUIT JUICES.

EDINBURGH EXHIBITION, 1890.

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IN THE ITALIAN SECTION,

Diploma of Honour

(The HIGHEST AWARD POSSIBLE)

FOR OUR

Essences Lemon, Orange, &c.

Manufactured at our Works,

VILLAGGIO GAZZI, MESSINA, SICILY.

IN THE FRENCH SECTION,

Diploma of Honour

FOR

Essential Oils, Extracts, &c.

Manufactured at our Works,

GRASSE (ALPES MARITIMES), FRANCE.

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(Introduced to the Medical Profession in 1878.)

AN IDEAL FOOD.

PALATABLE,

KEEPS PERFECTLY.



FOOD EXTRACT

CONTAINING 20 PER CENT. OF COAGULABLE ALBUMEN.

THE VITAL PRINCIPLES OF BEEF CONCENTRATED.

BOYININE consists of the juices of lean raw beef obtained by a mechanical process, neither heat nor acid beisng used in its preparation. The nutritious elements of lean raw beef are thus presented in a concentrated solution, no di integration or destruction of the albumen having taken place. The proteids in solution amount to twenty per cent. of the weight of the preparation, and give to it the great dietetic value it possesses in all conditions where a concentrated and readily assimilable food is needed.

BOYININE is entirely distinct from the numberless meat preparations prepared with heat. It is a Food,

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Composed of Yarrow, Dandelion, Comfrey, & Horehound ENLARGEMENT OF. SIZE.

A Sixpenny Bottle makes EIGHT GALLONS of

HERB OR BOTANIC BEER

A NON-INTOXICATING BEVERAGE

Full of Body and Flavour, with a Creamy Head like Bottled Ale, the most perfect substitute for Alcoholic Drinks ever discovered, for either Summer or Winter.

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MASON'S is the original and only genuine.

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Make Temperance Wines in a few minutes.

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Scotch beef,

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English

The London Medical Recorder says: -- "Our inspection of the Works enables us to say that meat used in the manufacture

Caffyn's Liquor Carnis consists of the choicest parts of the hind-quarters of the best bred and fed

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The Chemist and Druggist says: -"The success of this Company is beaten in rapidity by the expertness with which prime Professor Wanklyn reports:—"I have visited the works of The Liquor Carnis Company, Limited, and was considerably English oxen and Aberdeenshire steers are transferred from green fields to amber glass bottles."

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TRUE PEPTONATE OF IRON is the produce of our laboratory alone, and is our discovery. The salt is precipitated from its solution in presence of the acid gastric juice, redissolved and absorbed with great rapidity in the alkaline medium met with in the duodenum, so that it does not interfere with digestion, and it is not chemically altered by the juices of the alimentary canal. Should be administered before meals, and its flavour requires no disguise.

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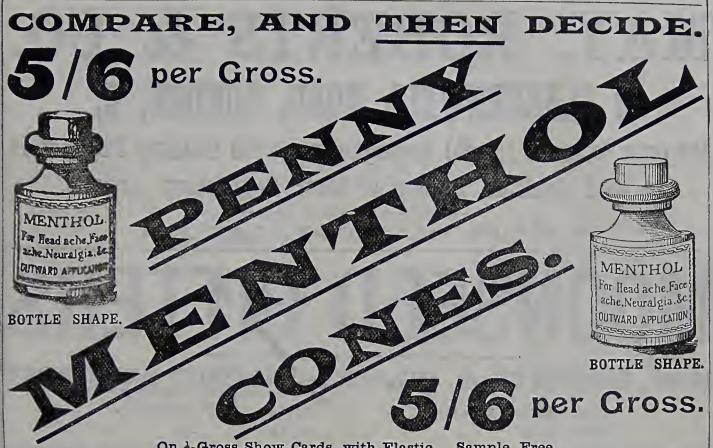
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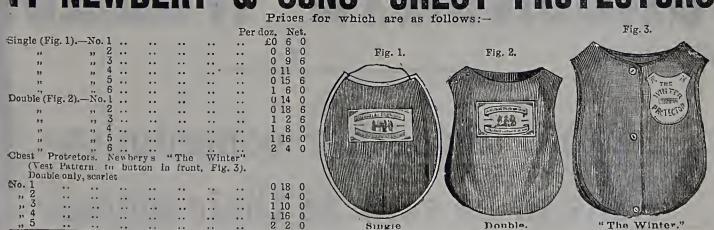
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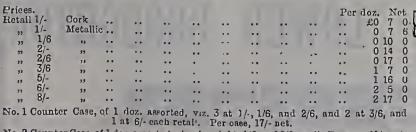
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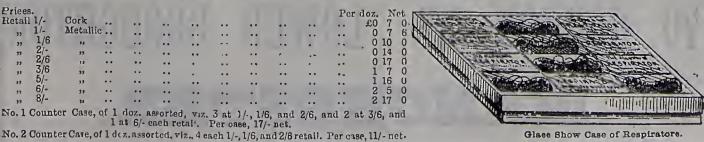
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For Australasian subscribers the subsidiary journal, THE CHEMIST AND DRUGGIST OF AUSTRALASIA, is included.

Kilerary Soulents.

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Legal Queries	Council Meeting

THE CHEMISTS' AND DRUGGISTS' DIARY, 1891, is being sent to subscribers as fast as our hinders can deliver them. There has been a little delay in this work in consequence of labour difficulties, but we anticipate that every copy will be delivered before this journal appears next week. Subscribers whose year of subscription expired with November are not entitled to the DIARY until they renew for another year. The delivery is undertaken by the Globe Parcels Express Company, and every copy should be delivered free. But in the event of any of the Globe agents demanding payment for delivery, we ask that subscribers will kindly pay the charge, taking a receipt for it. On sending the receipt to us the amount paid will be refunded.

with each copy of the DIARY issued in the United Kingdom during December we enclose a coupon entitling one person (it may be the subscriber, or the coupon may be

transferred to someone else) to compete for prizes offered, amounting to five guineas, for opinions concerning the advertisements. These coupons can be returned to us by the halfpenny post if filled up strictly in the manner indicated, and if they are sent to us unfastened. We shall be glad to get a good competition.

ADVERTISEMENTS of situations vacant and wanted, businesses for disposal, &e., will be received by us up till the first post on Friday morning.

CARDIFF gave Mr. Carteighe a good reception on Thursday afternoon, as will be seen by the report which we publish of the meeting held there. The speaking was nearly all in favour of a company clause, but the Bill as it stands got the support of the majority of the meeting.

THE ADDITIONS TO THE PHARMACOPEIA.—It is not known exactly when this hook will be published, but it is expected to be ready for circulation towards the middle of December. We will send a copy to any address as soon as it is issued on receipt of the published price, 1s.

PHARMACEUTICAL SOCIETY.—At the evening meeting to he held at Bloomshury Square on Wednesday next, a paper will he read "On the So-called 'Euealyptus Honey,'" by T. P. Anderson Stuart, M.D., Professor of Physiology, University of Sydney, N.S.W. The chair will he taken at eight precisely.

ETHER IS MADE A "POISON" IN IRELAND.

In the House of Commons on Monday, Dr. Cameron asked Mr. Gosehen whether his attention had been ealled to the address delivered by Mr. Ernest Hart on etherdrinking in Ireland, wherein it appeared that large quantities of duty-free methylated ether were retailed as a beverage and eheap intoxicant in South Derry and Tyrone, in virtue of the provisions of the Aet 18 and 19 Vic., eap. 37; and whether he would take steps to restrict this sale, and thus prevent the serious evils arising from it. The Chancellor of the Exchequer said the improper use of ether in certain rural districts of the North of Ireland as an intoxicant, with the serious and sometimes fatal results of the practice, had received the eareful attention of the Government, who have eonsulted the Royal College of Physicians, Dublin, with regard to it. In accordance with their recommendation, an order of the Lord Lieutenant in Council was issued on Saturday last scheduling ether as a poison; and it can only he sold as a poison. It is hoped that this measure will definitely stop the supply of ether to the public as an intoxicant. (Cheers.)

KOCH'S CONSUMPTION CURE.

In the House of Commons on Tuesday, Sir Walter Foster inquired whether the Government would take steps to obtain from the Government of Germany, at the earliest possible date, a supply of Professor Koch's fluid for the treatment of tubercular diseases, and distribute the same to recognised public institutions in the United Kingdom.

Sir James Fergusson: By the direction of her Majesty's Government our ambassador has applied to Professor Koch for a supply of his fluid, but it is reported that the quantity as yet available is very small; and the subject is not under the control of the German Government.

Sir Walter Foster: Will the right hon, gentleman take into consideration the second portion of the question?

Sir James Fergusson: Undoubtedly. The Agricultural Department, with whom the matter will lie, will, no doubt, do their host to distribute the fluid when it is procured.

Sir Walter Foster: May I ask why the Agricultural Department? (Laughter.) Why should they have charge of it?

Sir James Fergusson: I meant to say that the Agricultural Department have applied for a supply of Dr. Koch's

Mr. Chaplin (President of the Board of Agriculture) shook his head, amid further laughter.

Provincial Beyorts.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor will much oblige.

LEEDS.

MR. CARTEIGHE'S VISIT.—The meeting on Thursday last week was not so largely attended as it might have been or as was expected. Leeds contributed a minority of those present, Sheffield sent ahout ten as "a deputation," and a dozen other towns were represented by twos and threes, Most of those from distant towns had come to see what manner of man the President was, and, having gazed their fill, straightway departed, leaving but thirty, including all the Sheffield men, to join Mr. Carteighe at dinner in the

Queen's Hotel.

The meeting was distinctly dull for the first half-hour. Mr. George Ward, president of the Leeds association, made a good chairman, but spoke little, and when Mr. Carteighe rose, it was soon discovered that he had nothing to say which he has not said over and over again during his campaign, and a section of the meeting who seemed to appreciate that fact keenly became impatient. Mr. G. N. Chadwick, of North Street, Leeds, gave expression to this impatience when he asked Mr. Carteighe to come straight to the company clause, and to make sure about it Mr. Chadwick wished Mr. Carteigte to read what THE CHEMIST AND DRUGGIST had said the Saturday hefore. Mr. Carteighe, however, went on the even tenour of his way, amidst growing listlessness and a conspicuous absence of encouraging cheers while he was speaking.

Mr. Richard Reynolds's speech in moving the resolution approving and supporting the Bill was mainly taken up with educational matters, in which he is well informed, but he could not help bringing in a few remarks at the end of his speech regarding limited company pharmacy, and it was apparent that he did not regard the curriculum as the salvation of the drug trade. Mr. Reynolds gave the impression of not fully speaking his mind, although he indicated his sympathy with anything that could be done to stop unqualified persons inflinging the Pharmacy Act by incorporating them-

In his reply Mr. Carteighe skilfully avoided the direct issues placed before him by speakers. Mr. Ward, of Sheffield, had asked him to point out wherein company trading was similar in principle to trading under the widows clause. Others also asked about this redoubtable clause. The term "medical prescription," was a good deal discussed, and Mr. Maud exposed the absurdity of an earlier definition by asking, amidst hearty laughter, if his assistant would not he allowed under the new clause to make up a dog or horse hall during his absence? Neither of these points was satisfactorily met.

Mr. Maud's speech was very direct and effective. "The Bill," said he, "is a Bill for increasing the income and importance of the Pharmacentical Society." It would do little good to the rank and file of the trade; only the aristocratic pharmacists would feel the henefit of the prescription clause, for he had ascertained that only 2 per cent. of the husiness of country chemists was in prescriptions. It was a pity Mr. Mand had come to the meeting determined not to vote

either way.

Mr. Samuel Taylor was the most rational and determined opponent of the Bill as it stands, and, though defeated, it was quite evident that his amendment was not in all senses rejected. Neither Leeds nor Liverpool will be quoted among the stalwart supporters of the Council's policy. It was somewhat remarkable that there was not found a single individual in the Leeds audience to support the platform.

At the dinner Mr. Carteighe was in excellent form. Hc spoke about the importance of local organisations (strange that this discovery should follow the census recently published in this journal), and said that a dream of his was the affiliation of local associations to the Pharmaceutical Society as branches. This idea, by the way, is an old one. When Jacob Bell visited provincial towns long ago, he started local associations as branches of the Society, but they

have all dwindled away except the Scotch one. Mr. George Ward, who presided at the dinner, had a word to say in regard to the Pharmaceutical Council making itself more felt in London before it began to meddle with provincial matters. Mr. Ward also spoke of the necessity of something heing done about company pharmacy. This was in reply to the toast of "The Leeds and Sheffield Associations, which was proposed by Mr. Jackson, of Bradford; Mr. Richard Reynolds and Mr. Bradwall, of Sheffield, also replied to it. Other toasts were, "The Chairman" and "The Secretary" (Mr. F. W. Branson), hoth of which were well deserved.

LIVERPOOL.

CHEMISTS' ASSOCIATION.—The next meeting will he held at the Royal Institution on Thursday, December 11. Papers are to be read by Mr. Michael Conroy, F.C.S, and Mr. Conroy, jun., B.Sc. The president will hring hefore the members for consideration a proposal to meet at 7 P.M. instead of 8 P.M. in future.

SOCIETY OF CHEMICAL INDUSTRY .- A meeting of the Liverpool section will be held at University College on Wednesday next, when there is expected to he a lively discussion on some matters relating to photography. A paper is to he read hy Capt. W. de W. Ahney, C.E., R.E., D.C.L., F.R.S., entitled "A Reply to Dr. Hurter and Mr. Driffield's paper on Photo-chemical Investigations, with special reference to the Sector and Grease-spot Photometers." Dr. Hurter and Mr. Driffield are to read two papers:—(1) "The Sector and Grease-spot Photometers and their Results"; (2) "The Relation hetween Photographic Negatives and Positives." Mr. Alexander Watt, F.I.C., F.C.S., will read a paper on "Apparatus for the Development of Photographic Plates without the Use of the Dayle Boom" without the Use of the Dark Room."

MANCHESTER.

THE SMOKING-CONCERT to he held at the Grand Hotel on Tuesday night promises to be a great success. Some 400 invitations have heen issued by the secretary of the Pharmaceutical Association.

THE FIRE AT THE EAGLE LABORATORIES (Messrs. Blyton, Astley & Co.'s) on November 20 originated, we are informed, in the pellet-compressing room. Notwithstanding that the whole force of the Salford Fire Brigade was engaged in comhating the fire, the destruction of the warehouse, stock, and plant was almost complete. Only the jujube-house—a separate huilding—was uninjured by the fire, though there a large quantity of stock was damaged by water. The engine and fittings were utterly destroyed, and the steam-pipes from the holler to all parts of the building were broken, and jets of steam were hlowing in all directions. "Jack," the terrier, helonging to the manager, lost his life in the fire, hut there were no casualties to any of the staff or foremen to record. The damage, which is very considerable, is understood to he covered by insurance, and we believe the firm have carried on husiness with hut little interruption.

NEWCASTLE-ON-TYNE.

CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIA-TION.—A meeting was held in Lockhart's Café on Wednesday evening, Mr. F. Park, president, in the chair. There was a very good attendance. Mr. William G. Robertson read a paper on "Some of the Uses of Colour in Flowers." The author commenced by commenting on the antipathy shown by many pharmaceutical students towards the subject of hotany, and advocated strongly practical study of the subject as at once giving to students a more thorough grasp of the science, and making it a most attractive and fascinating study. He then described the various uses of flowers, instancing their colour as a remarkable example of the economy of energy which is observable in all the works of nature, the most gay blossoms depending principally upon insects and birds for fertilisation, while dull-coloured flowers and grasses are fertilised by the wind, or other natural cause, so that the colour of a flower was really a most important factor in the reproduction of species. The absence of certain insects in the vicinity of large manufacturing centres accounted for

the total extinction of various plants which formerly had flourished in the district. Orchids, notably, became extinct in places which had been drained, the fertilisation heing dependent on insects which frequented moist and marshy places only. A number of excellent pen-and-ink drawings of the interior organs of flowers were shown. The most lively interest was evinced by the meeting, and the discussion which followed was taken part in hy Messrs. Park, Peter Bell, and Merson.

SCOTLAND.

ABERDEEN.

MR. MILNE, chemist, Old Aberdeen, has been unaniknously appointed Clerk to the Old Aberdeen Sick Labourers' Fund.

MESSRS. JAMES SIM & Co. inform our correspondent that it is they who dispense for the Boys' and Girls' Hospital, and not Messrs. W. Paterson & Sons, as stated in our last number.

DR. R. A. S. EDEN, who commenced life as an apprentice with Mr. G. P. Cruickshank, chemist, has obtained his cliploma in Public Health, and has been appointed to a vacancy on the medical staff of the Aberdeen Sick Children's Hospital.

DR. JAPP, the recently-appointed professor of chemistry, was inducted to the chair (in room of the late Dr. Carnelly), on Friday, November 28, and was introduced to his class by Principal Geddes, on Monday, December 1, thereafter delivering his inaugural lecture, in which he paid a high tribute to his late predecessor.

DUNDEE.

CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION. -At a meeting of this association, held on November 27-Mr. G. Little, vice-president, in the chair-Mr. R. M. Lindsay, secretary, read an instructive paper on "Pharmacy as it is." After referring to the ancient pharmacist, and contrasting the existing state of the trade, he said it was a pity that the British pharmacist had to depend so much on products of foreign mannfacture. The new remedies flooding our markets were mostly produced by Germans, Frenchmen, and Americans. He could not believe that English chemists were not capable of producing such articles if their technical education were more advanced. He advocated more nuited effort at pharmaceutical conferences, and deplored the fact of so few Scotchmen heing present at the conference held at Leeds this year. The value of the papers discussed there was no donbt great, but he thought the system advocated in an able leader of The Chemist and DRUGGIST-"that a research committee, or committee to examine all subjects brought before the conference, to report thereon, and to institute further inquiries where necessary, and so hring to a focus the scattered rays of light which pass over it annually "-would make the papers of much greater value. The pharmacist at present had to contend with unfair opposition: his business was not protected as it should he; and if ever he was to compete successfully with the Germans he must have hetter protection and higher education. After reading his paper, Mr. Lindsay showed a neat lime-water apparatus, made at little cost from an ordinary glycerine-tim, into the top of which a funnel was fixed, and on one side of which a tap was fitted ahout three inches from the bottom, ahove the level of the lime. A glass guage was attached to the outside. Several members expressed themselves in favour of the idea, and, on the motion of the president, Mr. Lindsay received the thanks of the memhers for his paper.—A smoking-concert was held in the rooms of the association on Thursday, December 4, when several vocal juniors entertained the members with songs, recitations, &c.—On Thursday, December 11, Mr. W. Lamont, Brechin, an honorary member of the association, will read a paper on "Gems."

GLASGOW.

MR. CARTEIGHE'S VISIT to Glasgow is expected in January next. A general meeting of the trade will he arranged for, and there are proposals of a more festive tendency.

ASSISTANTS' ASSOCIATION.—At the usual fortnightly meeting on Wednesday, December 3, Mr. J. P. Gilmour lectured on "The Microscope," giving a sketch of the optical principles, the mechanism, and the manipulation of the instrument. The lecture was illustrated by a series of photomicrographs of parts of insects, sections of exogenous and endogenous plants, foraminifere, polycystinal olitic limestones, injected animal tissues, shown by a lantern and also by diagrams indicating the action of different forms of lenses.

FIRE.—A large fire occurred last week at New Mills, Derhyshire, in which the shop and premises of Mr. Alfred Livesley, chemist and druggist, High Street, were completely destroyed.

CHEMISTS' ASSISTANTS' ASSOCIATION.—The next meeting of this association will take place at the rooms, 103 Great Russell Street, on Thursday, December 11, when a "musical and social" evening will be spent. Chair to be taken at 8.30 by A. H. Mason, Esq., F.C.S.

PROPOSED UNION OF ANALYTICAL CHEMISTS. — The Newcastle Chronicle is informed that several gentlemen connected with analytical chemistry on Tyneside have been discussing the propriety of forming a union of analytical chemists. A meeting will be held shortly to consider the matter, and discuss details of the scheme.

CARBOLIC ACID POISONING.—Annie Wilson, 18, daughter of a general dealer, of Oswald Street, Clapton Park, drank from a bottle containing carholic acid instead of one containing medicine she had been taking. She died last week in Hackney Union Infirmary.—An inquest was held at Camberwell on the hody of Alfred Luff, 60, an independent gentleman, who was found dead at 53 Coleman Road, Wells Street, Camberwell, last week. There was evidence that death was due to poisoning by carbolic acid.

CHLOROFORM FOR TOOTHACHE.—FATAL RESULT.—The deputy-coroner of Duhlin held an inquest on Monday at the Morgue on the remains of a girl named Mary Canning, who was found dead in her bed on Saturday night at 12 Merrion Square. The girl had been a lady's maid to Mrs. Jackson, and was suffering from toothache. She procured a bottle of chloroform and saturated a piece of wadding with it, which she applied to her cheek, and died from the effects of the narcotic. Dr. Boyd, who was called in immediately on the girl being discovered, gave it as his opinion that she had been dead for an hour and a half. The jury returned a verdict of accidental death from the incautious use of chloroform.

PLUCKY RESCUE AT A FIRE.—Police-constable Parry, of the Swansea Police Force, effected a very plucky rescue on Saturday last. On the morning of that day a fire broke out at the shop of Mr. Parlhy, chemist, Swansea, and it was discovered that a servant who had gone to a hedroom to the assistance of a child had not returned. By this time the flames had obtained a firm hold of the staircase, but Parry got a ladder and, after carrying it over a range of onthuildings, got to the window of the hedroom. The room was by this time filled with smoke, but this did not deter the constable, who boldly entered and, amid the cheers of the assembled crowd, brought safely to the window the servant and then the little child. Both were insensible, but, with attention, they speedily recovered.

THE ROYAL SOCIETY held its anniversary meeting on Monday, Sir G. G. Stokes, the retiring president, in the chair. In the course of his address the President stated that it had heen resolved to devote the Darwin fund income to an award, consisting of a medal and 100l., to be given once in two years, for work of acknowledged distinction, especially in biology. The society's and other medals were awarded at this meeting, amongst the recipients heing Professor Emil Fischer, who gets the Davy medal for researches in organic chemistry—especially in the synthesis of sugars; Professor David Ferrier, for work in connection with the surgical treatment of the brain; and Dr. J. Hopkinson,

who has made some memorable discoveries in magnetism and electricity. In the election of council, Sir William Thomson, D.C.L., of Glasgow, was appointed president, and he took the chair the same evening, at the annual dinner of the society, held in the Hôtel Métropole, signalling his advent by one of those witty, semi-scientific speeches for which be is noted.

Borrowed the Price of a Drink of Laudanum.—At an inquest held at Sheffield last week respecting the death of a labourer named Saville, a letter was read which the deceased had left, in which he narrated the troubles and poverty which had led him to kill himself. He told how many miles he had walked to look for work. Then he went on: "I have no doubt forgot to mention where I obtained the three sixpennyworths of laudanum. I got them at Boot's drug stores, in Snig Hill. I do not blame them for selling it to me, for they asked me very particularly what it was for. My answer was for rubbing purposes for the rheumatics. This is how I got such a quantity at once. I have been very near pinched to obtain the last lot, for I had a job to raise the wind, but with a deal of tact and persuasion, I got the money from a friend. I had one halfpenny left me. I spent it in Westbar for a cup of coffee. I had a piece of dry bread in my pocket, which I was eating when a kind man gave me some pudding, which was part of his dinner."

Foreign and Colonial Rews.

CUSTOMS DUTIES IN GERMANY yielded in 1889 a revenue of 360,276 038m. against 290,160,365m. in 1888. Among this amount "drugs, apothecaries' wares and dyestuffs" stand for 929,740m. in 1889 against 1,022,798m. in 1888.

THE PHARMACEUTIOAL SOCIETY OF VICTORIA.— Mr. Thomas Huntsman, who has been president of the above society since 1880, retired from the office in October last, and Mr. H. W. Potts, of Melbourne, was elected in his place. The council of the society resolved at their October meeting to bring under the notice of the Pharmacy Board of Victoria the fifth clause of the Pharmacy Act (Ireland) Amendment Act, 1890, and to urge upon the board not to recognise the certificate of "chemist and druggist, Ireland," as a qualification for registration under the Victorian Act.

The Philadelphia Druggist's Face Ointment.— Miss Elizabeth Duling, of Philadelphia, is suing Mr. C. W. Hallowell, a druggist, of 1301 South Sixteenth Street of that town, for \$5,000 damages for injury to her face owing to the application of a box of the defendant's "Circassian Face Ointment." Miss Duling asked for an ointment to take the tan and freckles off her face. The druggist Hallowell recommended his Circassian cosmetic to her, and she applied it as directed by the wrapper. Instead of the expected benefit, Miss Duling claims to have been caused great pain and serious damage. Her lawyer says the action is brought to keep druggists from recommending articles for use when they are ignorant of the nature of the ingredients.

FREE PACKAGES AND DELIVERY IN AMERICA.—The Baltimore wholesale druggists have called a meeting to "consider the box and cartage features," as they call it. It is not, as the mysterious announcement might lead to suppose, for the gratification of esthetic rapture derivable by gazing upon the beaux yeux of Box and of Cartage that the meeting has been called, but for the more prosaic purpose of trying to recoup the trade for the outlay on the packages in which goods are sent out, and for cost of delivery. The system of delivering goods free and throwing in the packages has been very largely adopted in America, and the Baltimore people are now trying to organise a stand against it. They talk of charging 25c. on every invoice to cover part of their outlay. The Chicago paint-jobbers are also on the war-path in the same cause.

FOR STERILISING MILK, Dr. Heidenhain recommends the addition of two or three tablespoonfuls of hydrogen peroxide solution to each pint. This preserves, as well as sterilises, the milk, and does not curdle it.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

JOSÉ JERONIMO FRIANA, a celebrated botanist, diedrecently in Paris. He was a native of Granada, and was theauthor of several celebrated works, including "Nouvelles Études sur les Quinquinas," which contains facsimiles of the original drawings by Mutis.

THE MEDICINE STAMP.—In the Chamber of Deputies the Commission on pharmaceutical legislation is said to have given an advice unfavourable to the tax. On the other band, it is asserted that the Minister of Finances expects to be defeated on two points, but to make up by his success in securing the higher income-tax and medicine-stamp laws.

ATTEMPTED POISONING.—The case of Barbier, an eating-house keeper at Lyons, was adjudged last week. The prisoner was charged with attempting to poison two young children, the sons of his wife by a former husband. He would every morning mix some white lead with the children's cocoa. Two years' imprisonment has been the sentence.

VEGETABLE BUTTER.—A new artificial butter has made its appearance on the French market, which has already been heard of and, it is said, will be introduced in England. It is made from coco out oil, purified with alcohol and bone-black. The washing with alcohol removes the unpleasant aromatic principles and all tendency to rancidity. The washings are used for making artificial flavouring essence-employed for liqueurs and confectionery. As the usual tests for margarine fail with the new counterfeit butter, analytical chemists are devising methods for identifying coco-butter (not cacao-butter) and cow-butter "cocotised."

AN INTERVIEWER GETS ONE MONTH.—Pharmacist P. Vigier, of the Rue du Bac, has had an unpleasant experiencewith reporters. Although one of the panel from which the jury in the Eyraud murder case was to be drawn, he allowed himself to talk about the affair with a nice young man introduced by a mutual friend. The nice young man happened to be one Jean Moro, an occasional reporter for Le Matin, and the next day that paper published a sensational article implicating some twenty one jurymen out of a panel of thirty-six. Most of the statements afterwards proved to be mendacious, but there was truth enough among the lies tocause a postponement of the case, needless expense to the department, and much annoyance to worthy people. The next thing in order was to punish the reporter, and aningenious lawyer found the means in a statute edicting a penalty of from two weeks to two years' imprisonment for insulting a juryman. The Correctional Tribunal held asking a juryman questions about a case he is to sit in is an insult, and sentenced Jean Moro to one month's imprisonment and

KOCH'S METHOD IN FRANCE.—In answer to Pastenr's telegram, mentioned last week in THE CHEMIST AND DRUGGIST, Professor Koch has written a letter of acknowledgment, saying he considers Pasteur's congratulations a great honour, and begs to present his sincere thanks to himself and his staff for their kind wishes. As a token of gratefulness, a specimen of the new medicament is forwarded for experiment. Two phials of the lymph were received, but tuberculosis not not being in the line of the Institute, Pasteur sent the specimens to the Director of the Assistance Publique for distribution among such hospital physicians as dispose of the appropriate clinics. The experiments made with these patients and with others treated previously, have so far substantially confirmed all that the German scientist claims for his virus. The elective action on tuberculous organs was noted, also the remarkable curative effects on lupus At the same time, while attributing to Koch no unworthy motives, it is considered much to be regretted that the formula of the prophylactic liquid should be likely to become a Prussian State secret. As a contrast, it is pointed out that when Pasteur made his first communication on rabies vaccination, he disclosed at the same time both his theories and his process. In reference to the curative value of Koch's method in phthisis, all agree it is too soon to express an opinion.

· PARIS SOCIETY OF PHARMACY.

AT the meeting on Wednesday, December 3, several communications were read from country pharmaceutical associations protesting against the proposed medicine-stamp law. Some confidential intelligence was also received respecting the feelings in Parliament. "The Bill." said the informant, is much in need of friends, as it is very sick."

COPPER IN PRESERVED VEGETABLES.

M. Ferrand presented a memoir by pharmacist Le Mestre, of Bordeaux, who has thoroughly investigated the question, and performed a number of analyses before coming to an His conclusions are, that the quantity of copper present in vegetables artificially faced is exceedingly small, and entirely narmless; that nearly all vegetables naturally contain copper, and some, like cacao beans, a larger proportion than is ever employed in facing green peas or string beans. The memoir seems to be addressed less to French than to foreign consumers, who are not quite educated up to the point of liking copper in their food.

WANTED A RUE-SÉRULLAS.

M. Barillé, the pharmacist-in-chief of the Vincennes military hospital, recalled the name of Sérullas, the celebrated military pharmacist, well-known for his chemical discoveries, who in 1832 died of cholera at his post, the Val-de-Grâce, where he was the pharmacist-in-chief and director. His name was to have been given to one of the new streets in the Latin quarter to perpetuate his memory, since even the place of his grave at the Père Lachaise cemetery cannot be found. M. Planchon said the Prefect of the Seine at one time spoke of one of the new streets around the College of Pharmacy as the appropriate place, but somehow the project was never put into execution. One of the members wisely remarked that the best way to get what they want is to apply tirst to the Municipal Council. They have there a pharmacist who will no donbt willingly further the project, and it is more likely to be favourably entertained by the Council than if it is presented by the Prefect of the Seine. At which allnsion to the love wasted between Conncil and Prefect the assemblage softly smiled.

MISCELLANEOUS.

M. Barillé also moved that a complete revised list of members be published every year in the Journal de Pharmacic et de Chimie. As no list has been published since 1877, and not long since there was some donbt as to whether the Society had two vacancies or one member too many, the proposition was agreed to.

No theses having been offered this year to compete for the orizes devoted to the purpose, no committee will be needed. The conditions for obtaining the triennial Dubail prize, which comes due next year, will be posted in the college

for the benefit of candidates.

ELECTIONS.

At the second ballot M. Portes was elected vice-president for the coming year. Other officers were selected by acclamation. In consequence the Board for 1891 will be composed as follows: - President, M. Moissan; vice-president, M. Portes; general secretary, M. Planchon; general-secretary-adjunct, M. Bourquelot; annual secretary, M. Léger; archivist, M. Schmidt.

Legal Reports.

THE APOLLINARIS COMPANY'S TRADE-MARKS.

On Tnesday, December 2, the hearing of the arguments in the ten appeals brought by the Apollinaris Company from Mr. Justice Kekewich's decisions in respect of their registered trade-marks was concluded, before Lords Justices Lindley, Bowen, and Fry. Their lordships took time to consider their judgment on the various points raised.

Spurious Beechan's Pines.

On Friday, November 29, Mr. Virgington, Q.C. (with whom was Mr. Eve), on behalf of Mr. Thomas Beecham, applied to Mr Justice Kekewich, sitting in the Chancery division of the High Court of Distree, for art vijunction to restrain Mr Foster, chemist, of Greek Street, Fortsea (the appeared in person), from selling, as Beecham's, into pot of the plaintiff's manufacture. Many imitations of these pills having been sold, Mr. Beecham (the learned counsel said) had lately been on the alert, and there were affidavits that defendant had sold to seven or eight different become pills. defendant had sold to seven or eight different people pills which he represented as Bercham's; but that gentleman would prove that not one of the number was made by him. Defendant had filed no affidavit in reply, but, being present, his landship around the seven and the seven are seven as a seven or eight defendant had filed no affidavit in reply, but, being present, his lordship would have an opportunity of hearing what he

Defendant said he appeared to admit that he had sold 8d. worth of pills, for which he humbly apologised to the plaintiff, and would agree to a perpetual injunction.

His Lordship: That is the wisest course you could pursue. I do not know whether the plaintiff will, in these circum-

stance, press for cosis.

Mr. Warmington said they saw no grounds why they should not. There was no reason why any mistake should have been made. Not one of the pills he sold as such was a Beecham's pill, and the affidavit showed that defendant himself supplied them.

Defendant: I told them they were not Beecham's pills,

and I consent to a perpetual injunction.

His Lordship: You must pay the costs.

Mr. Eve then made four other applications of a similar kind. The first was against Messrs. Baker & Son, chemists and druggists, Queen Street, Portsea, who were not represented, and affidavits having been read as to purchases of one of the defendants of pills, as Beecham's, not of the plaintiff's manufacture, his lordship said the injunction would issue.

Mr. Close, medical herbalist, of Charlotte Street, Landport, on a similar application against him, appeared in person. He said he had not been in occupation of the premises very long, and he understood pills had been sold there before his possession. He refused to sell them until he was worried time after time, and on the 11th of this month he sold a box of his own, but did not represent them as Beecham's; he told the buyer they were his own, and he thought that a trap had been laid for him. He had been told that his young daughter had also sold pills of his when asked for Beecham's, saying she had not got them. But he could not defend any action.

The Judge: The best thing you can do, if you have done as you say, is to submit to an order. You had better go and

make arrangements, if you can, ontside the court.

Defendant accordingly left, and returning at a later period said he had consented to an order.

His Lordship: And to pay the costs? Defendant: Not to-day, I suppose.

His Lordship: I dare say they won't press you for a week

Mr. Eve then asked for a similar order against Mr. G. M. Clue, chemist and druggist, of Butcher Street, Portsea, saying that Mr. Eustace Smith, who appeared for the defendant, would give an undertaking until the trial, costs of the motion to be costs in the action.

His Lordship: That would be so in any case. Very well, take your order.

The last case, Mr. Eve said, was against Mr. Thomas Phillips, chemist and druggist, of Queen Street, Portsea, and

Mr. Ashton Cross, who appeared for him, had agreed to treat the motion as the hearing of the action. Mr. Ashton Cross said that was so. He ought to state, on

his client's behalf, that a drunken man going into his shop and asking for Beecham's pills, and not having them at hand, he thoughtlessly sold those complained of.

His Lordship said the order would issue as a perpetual injunction.

THE "BLOOM" OF MINERAL OILS can be removed by the addition of nitrobenzol or nitronaphthalin. About 02 per cent. of the latter is sufficient to counteract the fluorescence this being due to the yellow colour of the nitronaphthalin.

Pharmaceutical Society of Great Britain.

COUNCIL MEETING.

THE Council had a taste of its new chamber on Wednesday as it looks under a deuse pall of London fog, and it came out well, although the walls are innocent of the decorator's art. The chamber was cozy-looking with the combination of gas and oil lamps, but immediately the minutes were read reporters had to seek the outer darkness while the Council arranged what was to be done regarding the

ELECTION OF BOARDS OF EXAMINERS.

On resuming, a formal ballot was taken which resulted in the re-election of the members of the London and Edinhurgh boards with the exception of Mr. Samuel Gale, who has resigned his position on the London board. In his place Mr. W. Murton Holmes, a Belgravia pharmacist, has been appointed. Mr. Holmes is a good choice, as he knows his business well, and is of courteous and kindly disposition, which will go a great way to make him a favourite with candidates. The boards as elected are constituted as follows, the President and Vice-President heing ex-officio members of both boards:—

London.

Blunt, T. P., Shrewsbury Bowen, J. W., London Corder, O., Norwich Davies, R. H., London Druce, G. C., Oxford Fletcher, J., Cheltenham Gerrard, A. W., London Greenish, T. E., London Holmes, W. M., London Ransom, F., Hitchin Saul, J. E., London Symons, W. H., London Tanner, A. E., Tottenham Taylor, G. S., London

Edinburgh.

Clark, W. I., Edinburgh Dott, D. B., Edinburgh Gibson, A., Edinburgh Gilmour, W., Edinburgh Kinninmont, A., Glasgow Maben, T., Hawick Nesbit, J., Portobello Stephenson, J. B.

The PRESIDENT moved a cordial vote of thanks to each number of the boards in England and Scotland for their services during the past year. He said he was quite sure they all appreciated the zeal, devotion, judgment and care shown on the part of the boards. (Hear, hear)

The VICE PRESIDENT seconded the vote of thanks, which

was carried unanimously.

TIME OF MEETING.

Mr. NEWSHOLME moved, and Mr. ALLEN seconded, that the Board of Examiners meet in 1891 in London in the months of February, April, June, July, October and December; and in Edinburgh in the months of January, April, July and October. The motion was agreed to unanimously.

After several elections, the Secretary reported that the name of Mr. J. C. Hewlett, 40 Great Charlotte Street,

London, E.C., had been

ADDED TO THE REGISTER OF CHEMISTS AND DRUGGISTS.

Thereupon Mr. Newsholme asked on what qualification. The Secretary replied that Mr. Hewlett was in business prior to 1868.

Mr. NEWSHOLME then attempted to further question the

Secretary, but

The PRESIDENT interposed, and submitted that no question onght to be put, as the Registrar was fully satisfied with the correctness of Mr. Hewlett's declaration, and only when the Registrar was not satisfied should questions be put. (Hear, hear.)

The matter then dropped.

LOCAL SECRETARIES AND SUPERINTENDENTS.

The following gentlemen were appointed to act as local sceretaries in the districts named:—

Mr. Wm. W. Baxter, Bromley | Mr. Geo. Cole, Jersey Mr. Edw. Taylor, Rochdalo

The PRESIDENT submitted the names of those who had agreed to act as superintendents and deputy-superintendents

of written examinations in the centres agreed upon last month. He intimated that letters had been received from Kirkwall, Orkney, suggesting the desirability of appointing examiners for the locality, and from Truro desiring that that city should be retained as a centre. These matters he proposed, should be considered in due course for next year. It would be impracticable at present as far as Kirkwall and the Shetland Islands were concerned to appoint superintendents, there. There was great difficulty in communicating with these parts during the winter months.

Mr. Evans asked if they could not have some method of cheeking superintendents, such as existed in regard to examinations under the Science and Art Department. Hothought they should have some system to prevent undue sympathy; either inspection hy a member of the Council, or by a specially appointed officer. He thought there should be a little more supervision than there was at present.

be a little more supervision than there was at present.

The PRESIDENT said the suggestion might he thought about by the Boards of Examiners. He was quite sure that the Council would so far agree with Mr. Evans that, witbout pledging themselves to any system, it was of the highest importance that a superintendent should perform his duties properly—(hear, hear)—and should not allow any sympathy for those who were passing the examinations to make them lax in their duties.

Mr. Newsholme wished to know when the schedules of examinations would come into operation, as they were published in August on the understanding that they would come into force a year after.

The SECRETARY replied that the new schedules were

printed, and were now being eireulated.

The PRESIDENT: Practically, as there was no examination after August until October, the new schedules would come into operation in that month next year.

The resolution appointing the superintendents and deputysuperintendents was then put to the Council and passed.

VOTE OF THANKS TO MR. GALE.

The PRESIDENT said it was with great pleasure he moved the following resolution: - "That this Council much regrets the retirement of Mr. Gale from the Board of Examiners, and desires to express its appreciation of his valuable services during twenty-six years." Mr. Gale, he said, carried with him the best wishes of the Council and of his eolleagues on the Board of Examiners. He was not only an early pupil of the Society's schools, but he was Professor Redwood's demonstrator in the practical ehemistry laboratory dnring several years. His services to the Society had been of that quiet, unobtrusive but sterling character which it was very difficult to define. It was, therefore, only right that they should express their high appreciation of his services Personally, he (the President) felt it was a loss to the Society at large that Mr. Gale ceased to be one of their active officers. He did not know in London anyone who had done a greater share of work for pharmacy and for the good of the Pharmaeeutical Society than the gentleman who was leaving them. Mr. Gale was not unknown in medical and seientific eircles, and he had always obtained the respect of the society in which he moved for the pharmaceutical chemist of

to-day. (Applause)
The Vice-President, in seconding the motion, regretted very much that Mr. Gale had thought it necessary and desirable to retire from the board where he had rendered such excellent service, taking always a great amount of interest in his work. He felt it was a loss to the examination-room, and that they were losing one of those links which revived thoughts of the old Society, and connected

the past with the present. (Loud applausc.)

FINANCE REPORT.

The PRESIDENT, in moving the adoption of this report, said there was nothing special in the receipts except the payment by Messis. Churchill of 1,000*l*. for advertisements, which came twice a year. The penalties and costs for infringing the Act were pretty considerable. The former amounted to 20*l* 5*s*., made up of four penalties for four offences. The subscriptions to the Benevolent Fund had been better than in four previous months, the proximity of the election of candidates for annuities helping to bring in money; and there were also ground-rents paid in to the extent of 5*l*. 2*s*. 6*d*. The balance in the Benevolent Fund

was 536l. 6s. 2d., but nearly the whole of that would be swallowed up in January by the first quarter's annuities, so that that sum was not unduly large. Referring to payments, it was the custom in the month of December to pay their officers' salary for two months, and this would account for the seeming largeness of the amount recommended under that heading. The payment of 36l. 4s. 11d. to Mr. Morrison, solicitor, Edinhurgh, was also recommended, for the conduct of prosecutions in Scotland. That sum was the total cost to the Society, the actual amount being reduced by the penalties paid.

Mr. Evans wished to know if these were the costs for only

one case, and, if so, were they not rather large?

The PRESIDENT: There was only one case. important one in Glasgow against the unqualified assistant of a snrgeon [we reported this fully at the time], and although the amount might seem large, he thought, from his know-ledge of law expenses, that the bill was very just and reasonable. Reverting to the report, the President said it was recommended to pay Mr. Parkinson, who was engaged in arranging the secretary's room in the other house, the sum of about 100l., and a further sum of 135l., or thereabouts, for gasfittings, hells, and other internal fittings, which they preferred to take out of the huilder's contract and pay direct. They asked for 250l. to cover these two amounts.

Mr. Evans wished to know if, after the completion of the bnildings, a balance-sheet would be suhmitted to the Council showing how the money had been expended—the

exact amount the huildings had cost.

The PRESIDENT replied in the affirmative, but he thought Mr. Evans would find what he wanted in the auditor's report when presented.

The report was agreed to.

BENEVOLENT FUND.

The VICE-PRESIDENT moved the adoption of this report, in which three grants, amounting to 201., were recommended.

Mr. ATKINS, seconding the motion, appealed to those who were now distributing their Christmas gifts not to forget the Benevolent Fund. Although they had a very respectable balance it must not be thought they were getting wealthy, and did not require any further assistance. (Hear, hear.)

LIBRARY, LABORATORY, MUSEUM, AND HOUSE COMMITTEE.

A formal report was suhmitted, which showed that there had heen 658 visitors to the library in the day-time during October, and 244 at night. 137 books were lent to London readers in the same time, and 120 to country readers. The mnseum was almost up to the library in regard to day visitors—it had 654—but it was far hehind at night, only 87 signing the roll. The committee had considered Mr. Schacht's resolution regarding annual provincial meetings, and also draft of a scheme submitted by him, and the matter was deferred for a month.

On this report, Mr. EYANS suggested that the committee should meet on the third Wednesday of the month instead of the second, as it was very inconvenient for country memhers to come up to London two weeks in succession. He had mentioned this matter before, but then there was a difficulty in the way owing to the rooms heing required for other purposes; but that could not now obtain, sceing that

they had more accommodation.

The PRESIDENT promised to have the matter talked about

at the next committee meeting.

Mr. SCHACHT echoed what Mr. Evans had said. It would, for instance, be inconvenient for him to attend next week,

when his draft scheme was under consideration.

The President reminded the members that when any special husiness, requiring the attendance of provincial members, came on, special meetings were held. He had no objections to the matter being considered, but, at the moment he recalled several conveniences which warranted the present arrangement, and the evening meetings were held on the same day. London members were always willing to sacrifice their own convenience for the sake of country memhers, and they would do so in this case if it was thought to be necessary. He also recalled the fact that special meetings of the committee were often held on the

day before the Council meetings, so that provincial members could attend.

Mr. ATKINS said there was a good deal to be said for personal convenience. It so happened that he had got the monthly meeting of another board changed to the third Wednesday of the month so that he might attend the Library Committee. (Laughter.)

The PRESIDENT said they could not alter the arrangement

until May next.

Mr. Evans: Perhaps by that time Mr. Atkins will get the date of his other board meeting altered. (Great laughter.)

Mr. NEWSHOLME suggested that the meeting to discuss Mr. Schacht's scheme should he held on the day before the next Council meeting, which idea met with general approval, as also did a suggestion from Mr. Schacht that copies of his draft scheme should be circulated amongst the members.

The Treasurer (Mr. Hampson) stated that the time had come in his opinion for furnishing the building, and he suggested that the matter should be considered by the Building Committee. This also seemed to be the feeling of the

Council.

The report was adopted. The next matter had reference to

THE PHARMACOPŒIA.

The PRESIDENT said that the Council's committee had finished their labours two honrs before, and he was enabled to suhmit the following report :--

The committee appointed by the Council to advise and assist the Pharmacopæia Committee of the General Medical Council as to the manner of preparing and defining the medicines and compounds named by the General Medical Council as additions in 1890 to the British Pharmacopœia, hegs to report that it has completed its lahours and forwarded its work to the chairman of the Pharmacopæia Committee of the General Medical Council.

The acknowledgment of the committee's work is to be found in the reply from the General Medical Council recorded in the minutes of that hody of Saturday, November 29, a copy of which, together with an early copy of the addendum, has, by the courtesy of the General Medical Council, heen forwarded to each memher of the Council of the Pharmacentical Society

and of the Pharmacopœia Committee.

In conclusion, the committee desires to record its cordial appreciation of the iudefatigable services of Professor Attfield as reporter to this committee. His knowledge and continuous assistance have been of the greatest value to every member of the committee.

A letter was also read from Dr. Quain, chairman of the Pharmacopæia Committee of the General Medical Council, in which certain communications were acknowledged, and thanks expressed in warm terms for the services which had heen rendered by the Pharmaceutical Society's committee. The PRESIDENT also proceeded to read an extract from the minutes of the General Council, wherein the same services were referred to. [This we give in our special report on page 773] The President, continuing, said he hoped the Council would view the report with satisfaction-(hear, hear)—and suggested that a resolution should he passed receiving the report, and that appreciation of the work he recognised hy a cordial vote of thanks. (Applause.)

The Council was in a mood to do anything that it was asked, especially in regard to the completion of a work which it has always longed to do, but never got the chance of doing until Professor Attfield worked the oracle. Accordingly, the President submitted the motion for the adoption

of the report, and

Mr. HAMPSON, in seconding it, said he was delighted to have the opportunity. He was quite sure that the resolutions of the Medical Council in regard to the work done hy the committee were gratifying to every member of the Council. The relation of medicine and pharmacy was shown in such association as this in a way which was extremely gratifying. He felt that that day marked a new era in the history of the Society, and trusted that the relationship would be strengthened by the work which had been done. (Applause.)

This motion was carried unanimously; then came the

second, spontaneously moved by

Mr. HARRISON. This was to the effect that each member of the committee he thanked. In putting this Mr. Harrison said he endorsed what Mr. Hampson had said as to this marking a new epoch in pharmacy. It showed that the two hodies were coming into closer relationship with each other; and showed also that an important step had been taken in which they whose qualification it was to make medicinal preparations should he consulted in regard to the compilation of the official standards for such preparations. He held that it was a reasonable and proper thing that they should be consulted, and concluded by complimenting his fellow-members on the realisation of their hopes. Applause followed these sentiments.

Mr. WALTER HILLS asked to be allowed to second the motion. It was a pleasant outcome, he said, of a nice arrangement hetween the Medical Council and themselves, which particularly pleased him, hecause years ago he had unsuccessfully urged upon the Council the advisability of

getting the Council to act in this way.

Mr SCHACHT said it was not often they had the pleasure of having such a matter as this before them; not often that such a strong committee as that which was mentioned in the Pharmacopœia addendum could he found in their ranks, therefore he thought it right that he should read out the names of the gentlemen composing it-which he did. Although they are mentioned elsewhere in this issue, we may repeat them here: Messrs. M. Carteighe (President), A. Bottle (Vice-President), W. Inglis Clark, D.Sc., C. Ekin, S. Gale, H. G. Greenish, N. H. Martin, W. Martindale, and C. Umney.

The PRESIDENT was glad these had been mentioned, and said that not the least gratifying thing was that the Medical Council was so appreciative. (Loud applause.)

This motion was also carried unanimously. Next followed

a vote of

THANKS TO PROFESSOR ATTFIELD.

The PRESIDENT moved it, saying that the professor, in addition to acting as reporter to the Medical Council's committee, had acted as secretary and reporter to their own committee, and it was due to him that they should pass a special vote of thanks, for, though he was one of their officers, he had in this case done them distinct service. It would be fulsome on his part to say anything ahout Professor Attfield's capacity—they knew that he was an extremely good organiser, and able to remove those little things which caused friction between two great hodies; nor did he require to speak of the professor's association with the General Medical Council, but he would say that it was gratifying that the Society had an officer who could do services such as the Medical Council so highly appreciated. (Applause.)
The motion was seconded by the VICE-PRESIDENT, and

carried unanimously.

THE PHARMACY BILL

only came hefore the meeting in the form of two letters from Sheffield and West Islington chemists approving of the Bill, and a petition from pharmaceutical chemists and chemists and druggists of Bristol, sent by Mr. J H. Williams, urging the Council to amend the Bill hy including in it a clause to prevent limited companies, registered after the passing of the Bill, from assuming the rights conferred under the Pharmacy Act. On the motion of Mr. HARRISON these communications were referred to the Law and Parliamentary Committee. At this stage the following brief conversation transpired.

Mr. Southall: Nothing from Birmingham ?

The PRESIDENT: No. (Laughter.)

Mr. Southall was surprised.

The PRESIDENT: I come from there myself. He then proceeded to speak of the meetings which he has been holding throughout the country, finishing up by saying that he was gratified by the feeling of loyalty which was manifested everywhere towards "the only body which can represent the drug trade." "Hear, hear," said everybody except Mr. A. C. Abraham and Major Richardson, who were not present to "hear."

This concluded the public business.

ELECTION OF ANNUITANTS.

A meeting was held at the Pharmaceutical Society's offices, 16 Bloomsbury Square, W.C., at 12 noon on Thursday, December 4, to count the votes sent in for the election of six annuitants. The following gentlemen were appointed scrutineers: -Mcssrs. E. N. Butt (chairman), E B. Stamp, C. M. Luxmore, H. Bate, W. Murton Holmes, W. Pickard, John T. Wallis, Henry Long, R. O. Fitch, Walter Hills, E. M. Burden, A. Pellew, W. P. Robinson, J. W. T. Morrison, J. C. Umney, W. F. J. Shepheard, J. Goodwin, R. Hampson, Maurice Howell, W. K. Hopkin, R. Thomas, and J. Ord Smith. The number of voting-papers sent in was 4,122, and it was late in the afternoon before the report was presented, when it was found that of the above number 76 papers, representing 228 votes, were informal (45 unsigned and 31 incorrectly filled in), and were accordingly disallowed. The result of the voting was as follows, the first six persons named being the new annuitants:-

Votes to Credit Total Votes .. 4,144 6112 Spendelow, Mary E. (60) Skoulding, William (85) 90 6,082 2,402 4,421 Davies, Samuel F. (73) • • .. Brown, Eliza (60) 2,706 3,856 •• •• Suggate, Henry E. (73) 494 2,277 Hills, Henry (74) 14 .. 2,244 .. Bensley, Harriet M. (54) 1,769 Rowan, Mary B. 1,562

THE PHARMACOPŒIA ADDITIONS.

T the meeting of the General Medical Council on Saturday last, Dr. Quain, the chairman of the Pharmacopæia Committee, submitted the following report, which, as reported by us last week, was referred to on November 25:-

The Committee have to report that a list of the thirty-seven proposed additions to the Pharmacopæia, recommended by the Committee and approved by the Council, was sent in accordance with the direction of the Council to the Pharmacentical Society of Great Britain, and also to the Pharmacentical Society of Ireland, with a letter to each Society inviting their assistance in defining and preparing the several additions. The Committee have, in reply, received from the British Pharmacentical Society a complete set of recommondations respecting every article of the proposed addendum, together with four subsidiary articles (namely, wool fat, Fehling's solution, gelatine, and the hark as well as leaf of witch hazel), rendered necessary for the production of certain of the thirty-seven primary additions. This Society has also forwarded a report of the proeecdings of a special committee appointed by their Conacil to deal with the proposed additions in the manner desired by the Medical Council.

The Committee recommends that the best that ks of the Medical Conneil be presented to the Conucil of the Pharmaceutical Society of Great

Britain for the valuable assistance rendered.

The Committee view with satisfaction this conjunction of medical and pharmacentical work in the production of the present extension of the Pharmacopæia, a combination that cannot but be productive of future, as well as immediate, benefit both to medicine and to pharmacy. To the annual Reporter on the Pharmacopæia to the Medical Conneil, Professor Attfield, must be accorded the credit of initiating and organising this desirable nnion.

The Committee recommends the further addition to the articles already approved in the addendam of the following three substances :- Acetanilidnm, phenacetinnm, and pulvis sodæ tartaratæ effervescens, as well as the above-mentioned four subsidiary articles.

The Committee submits to the Conneil a copy of the addendum ready for press as soon as it has been approved by the Council. The Committee recommends that 5,000 copies of the addendum be printed, and that the price of each copy be 1s.

The Committee cannot conclude their report on the completion of the addendum to the Pharmacopæia without offering their te-timony to the eare, skill, and taet with which the editor of the work, Professor Attfield, F.R.S., has performed his manifold duties.

Dr. QUAIN, in presenting the report for adoption, expressed the pleasure he felt at suhmitting to the Council a report which gave the details of the work they had been engaged upon and the result of their labours. He expressed the hope that the addendum which they had compiled would prove satisfactory, and would meet every requirement that could reasonably be expected of it in regard to the introduction of new remedies.

Mr. BRUDENELL CARTER seconded the motion, and called the attention of the Council to the great care, labour, and energy devoted by Dr. Quain to the compilation of the addendum, which, he ventured to think, would satisfy every expectation and fulfil every purpose that could reasonably be required of it.

Dr. Leishman asked Dr. Quain, as chairman of the Pharmacopæia Committee, whether attention had been directed to the subject of certain impurities in salicylic acid

and the salicylates.

Dr. QUAIN, in reply, assured Dr. Leishman and the Council that the most careful attention had been given to the subject, and that he held in his hand a communication from Dr. Lauder Brunton on behalf of the Therapeutic Committee of the British Medical Association, together with the reply which would be sent to the committee.

Dr. Leishman said he was perfectly satisfied with the

answer.

The report was adopted *nem. con.*, and, on the motion of the President, a vote of thanks to Dr. Quain and the Pharmacopæia Committee for the energy and ability which they had devoted to the preparation of the addendum was passed.

Dr. QUAIN then moved :-

That the hest thanks of this Council he given to the Conocil and Pharmacopoia Committee of the Pharmacentical Society of Great Britain for the very valuable assistance rendered hy them in the preparation of the addendum, 1890, to the British Pharmacopoia 1835; and that cope so of the addendum he presented hy the Council to each memoer of the Committee, together with a copy of the minutes of the Conneil containing the report of the Pharmacopoia Committee of this Council.

He said that for his own part he was amply rewarded for his services in respect of the addendum by the vote of thanks that had just been passed, but he pointed out that their labour would have been vain had it not been for the assistance of the Council of the Pharmaceutical Society. He brought forward the resolution as a small expression of their indebtedness to the Council of that Society, who, he said, had devoted great skill and much time and patience to the work. He ventured to think that the result of their cooperation would be that very few corrections would be required in that work now that it was before the public.

Dr. MITCHELL BRUCE seconded the motion proposed by Dr. Quain, and cordially concurred in the views expressed by him in respect of the assistance rendered by, and the thanks

due to, the Council of the Pharmaceutical Society.

The motion was agreed to nem. con.

Personalities.

Mr. J. O. Morris, of Walsall, has sold his branch at Walsall Wood to Mr. J. H. Whitehead, of Leeds, through the agency of Mr. Brett, of Leicester.

Mil. T. E. Barrass, of Peterborough, has entered into partnership with Mr. G. Thonger, of Harborne, Birmingham. Mr. F. J. Brett, of Leicester, conducted the negotiations.

Mr. S.W. Woolley, pharmaccutical chemist, has opened a nicely-fitted pharmacy at the corner of Dresden and Gresley Roads, off Hornsey Lane, N. Mr. Elkanah Natali did the fittings.

MR. AND MRS. S. M. BURROUGHS have invited the male and female *employés* of Messrs. Burroughs, Wellcome & Co. to spend a social evening in Holborn Hall on December 18. This will make up for the smoking concerts which the staff formerly got up.

THE name of a Mr. Welby, M.R.C.S., L.S.A., practising at 2 Homer Street, Marylebone Road, London, was removed from the Medical Register last week, by order of the General Medical Council. He issued handbills of "an objectionable character and disgraceful to a medical practitioner," and carried on "an objectionable medical practice."

Trade Hotes.

UNIVERSAL HERBAL ALMANACK.—This is a penny almanack for 1891, published by Messrs. Potter & Clarke. It contains a great deal of useful information, including special articles entitled "Constipation and Cascara Sagrada," "Philosophy of Medical Botany," "Strength and Healing," "Old Age, and Hints how to Prolong Life," and "Information for the Nursery," as well as general information regarding herbal remedies. The publishers offer the almanack with name and address of retailers thereon.

MESSRS E. SACHSSE & Co., essential-oil distillers, of Leipzig, announce that Mr. Otto Lampe and Mr. A. Dufour Feronce have been admitted into the partnership, and will continue the business in conjunction with Mr. C. F. W. Ritzhaupt, who has for twenty years held the procuration of the firm, and in whom alone, for the present, the signature of the firm will be vested.

By testamentary disposition the wholesale drug firms of Brückner, Lampe & Co, in Berlin, and Lampe, Kauffmann & Co., in Leipzig, devolved, at the death of the late proprietor, Dr Carl Lampe, in December, 1889, upon his grandsons, Messrs. Albert Dufour Feronec and Otto Lampe. These gentlemen now announce that Mr. Richard Seifert, for many years procurist of the firms, has been admitted into full partnership, and that, for the present, they have renounced their rights to represent or sign for the business. Mr. Seifert is, therefore, now the only person in whom the signature is vested.

Gazette.

PARTNERSHIPS DISSOLVED.

Mellersh & Jolliffe, Crntehed Friars, E.C., ehemical manufacturers and dealers in chemicals and manues.

Smith, G., & Taylor, W., Prees, artificial manure manufacturers.

THE BANKRUPTCY ACT, 1883.

ADJUDICATION.

Campbell, Neil Edward, trading as Campbell & Co., late of Holloway Road, and arthur Road, Holloway, mineral-water manufacturer.

ORDER MADE ON APPLICATION FOR DISCHARGE.

Horner, James Read, Salterhehlle, near Halifax, ehemical manufacturer.—Disoharge suspended till May 5, 1891, and then granted.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

BREADNER—JONES.—On November 26, at St. Alban's, Cheetham, Manchester, by the Rev. F. R. Pearson, M.A., rector, Charles Gibson Breadner, chemist and druggist, to Kate, only daughter of the late Thomas Jones, of Cheetham.

SPEEDIE—COMRIE.—At St. Columba's Church, Edinburgh, on November 20, Robert Speedie, chemist, to Jane, only daughter of the late Duncan Comrie, ('rieff'.

DEATH.

HURRY.—On November 25, at Bungay, James Henry Hurry, chemist and druggist. Aged 48.

A concern has been floated in Rio de Janeiro called, the "Nacional Distillação e Perfumarias" company, with a capital of \$700,000, for the preparation of perfumes, vinegar, soda waters, writing-ink, &c.

MR. CARTEIGHE IN WALES.

ON Thursday afternoon, at Cardiff Town Hall, the chemists of South Wales and Monmouthshire, to the number of ahout forty, assembled to meet Mr. Carteighe and discuss the Pharmacy Acts Amendment Bill. Mr. John Munday presided, and after a few preliminary remarks, called upon

Mr. Carteighe to address the meeting. Mr. Carteighe was well received, and, in the course of his speech, said he thought that it would be wise to confine discussion to the constructive part of the subject. He asked them to do this, and at the same helieve him when he said there was no one in the trade who knew more about the difficulties of the whole situation, or who was more sympathetic with individual chemists and druggists than he. The meeting might rest assured that the differences between them and him, as representing the Council of the Pharmaceutical Society, would be of degree rather than of kind. In approaching Parliament it should be remembered, he said, that that body was a Free-trade Parliament, and if anyhody sought privileges from it they should be moderate. They must also be able to show that they had in the past done good service to the public, and that they were willing in the future to do better service. Mr Carteighe then proceeded to deal with the draft Bill, and urged that it was the only practical solution of the difficulty.

Mr. A. COLEMAN (Cardiff) then proposed:-

That this meeting of chemists of South Wales and Monmouthshire hereby expresses its approval of the draft Pharmacy Bill, and pledges itself to assist the Pharmaceutical Council to carry it through Parliament.

He (the speaker) said he honestly believed that the measure was one which would he found of very great advantage, and useful both to the Society and the trade. He welcomed the measure as a step in the right direction.

Mr. GROVE (Swansea) seconded the proposition.

Mr. DAVIS (Porth) complained that the powers possessed by the Pharmaceutical Society had not been put in force.

Mr. A. HAGON (Cardiff) then moved, as an amendment, a proposal to modify the seventh clause of the Bill so that it should he "unlawful for any person or combination of persons to assume the title of pharmaceutical chemist or chemist and druggist, or chemist, or druggist, or keep open shop for compounding medical prescriptions, or for retailing poisons, unless he or they he qualified by the examinations of the Pharmaceutical Society as a pharmacentical chemist, or chemist and druggist, or pharmaceutical chemists or chemists or druggists," reserving, however, the rights of medical practitioners and veterinary surgeons.

Also in clause 8, after "every person" to add "or persons."

Mr. Anthony (Cardiff) seconded the amendment. He

said that he did not see why the chemists should limit their demands. If the Council went in for the amendment they would have ten or fourteen thousand with them, and they

could carry every measure they wanted.

Mr. Mumford (Cardiff) supported both the proposition and the amendment, the latter hecause he wanted to push the thing further. There was one oversight in the amendment: no mention had heen made of the widows clause by the mover and seconder of the amendment, yet they had a suggestion from the last speaker not to exclude those companies registered up to date, for which, he thought, there

was something to he said.

Mr. SMYTHE (Merthyr) said he had heen connected with the Pharmaceutical Society since 1852, and he had always found a feeling that there was no use subscribing to the funds: the question was asked, "What do we get for it?" Speaking in regard to the restrictions that were wanted in the compounding of medical prescriptions, he said that the town in which he lived contained 60,000 inhahitants, and they had not a single medical man who wrote a prescription; and, what was more, these doctors made up the prescriptions of London specialists.

Mr. RICHARDS (Aherdare) also gave his support to the amendment. He thought it really cowardly on the part of a great body like the Pharmaceutical Society not making an attempt to attack the combination of grocers on the one hand and doctors on the other.

Mr. DAVIES (Merthyr) having spoken to a like effect,

Mr. SANDERS (Cardiff) asked whether it would not be possible to put in some clause compelling every person who took an apprentice to state on the indenture that a Preliminary examination had been passed. That would prevent young men going into the business to hecome castaways. He thought, too, that restrictions should not only apply to medical prescriptions, but to all medicines. In Cardiff, with 130,000 people, he supposed they had only two medical men who wrote prescriptions.

Mr. A. COLEMAN thought it would he very desirable if the intermediate examination were made to qualify apprentices

to dispense prescriptions.

Mr. LOVELUCK (Aberavon) asked if the amendment would not prohibit grocers and stores from selling patent medicines if such contained general poisons.

Mr. PRUST (Cardiff) thought if a young man were compelled to pass a preliminary examination hefore entering upon apprenticeship, that would save a great deal of trouble.

Mr. HICKS (Cardiff) thought Mr. Smythe had struck the right key note. If the Society was asked to prosecute an unlicensed man the reply was that they must have evidence. Men did not like to supply evidence and stamp themselves somewhat as informers. As far as the Bill went he agreed with it, but it did not do much, and was it worth the trouble? The only thing he could see was that the Bill would widen the foundations of the Society. With regard curriculum, he remarked that if that was With regard to the to increase expense it was not worth the trouble unless they got a quid pro quo. He did not think it was. What chemists wanted was to have their legitimate trade in their own hands. The chemist's trade was more largely poached than any other. He thought that medical men should give up dispensing, and that chemists really ought to ask for the sale of poisonons patent medicines to be placed on exactly the same footing as other poisons, and it was a question whether unqualified men should be allowed to make up such patent medicines.

Mr. DAGLEISH referred to many cases where unqualified persons carried on husinesses which had all the external evidence of being druggists' shops. He had no hesitation in saying that in some of these unqualified shops in Sonth Wales nearly every shape of poison could he purchased.

The CHAIRMAN pointed ont that in law whatever applied to the singular applied to the plural, therefore the amendment would not cover limited companies. People who urged that stores should he done away with were, to his mind, most misleading. If they could be stopped, chemists would find men arising out of their own ranks who would carry on exactly the same thing. Chemists were not alone in their grievances. An inqualified man could do the work of a dentist, and large establishments such as they saw at Matlock were hard upon medical men. In the House of Commons, he thought, the majority of members were connected with stores. Was it likely that they would do anything to injure these corporations? Assuming that they got a Bill legislation was not retrospective: existing rights would have to be acknowledged, so that no end of companies would be registered, and they would have more competition in this direction than at present. What he would like to see would he a similar state of things to what existed in France, where medical men did not dispense and chemists did not prescribe.

Mr. CARTEIGHE then replied, and said the Pharmaceutical Council could not accept the amendment, simply because there was no chance of carrying a Bill upon its lines. Their only chance was in showing that in what they did ask they were aiming to confer a public benefit. They could not get more than was embodied in the Bill, and if they tried to get what Mr. Hagon wanted they would damage themselves.

The amendment was then negatived by 24 votes to 12, and the motion agreed to with but one dissentient.

Mr. GWILYM EVANS then advocated the formation of a chemists' association for South Wales and Monmouthshire, and as one reason for this action he pointed out that the association, if formed, could select a man to sit upon the Pharmaceutical Council.

In the evening Mr. Carteighe was entertained at dinner at the Angel Hotel.

Very humourous speeches by Mr. Smythe and Mr. G. Evans were the feature there.

ADDITIONS TO THE BRITISH PHARMACOPEIA OF 1885.

THROUGH the kindness of Professor Attitled and the Pharmacopeia Committee of the General Medical Council we are in receipt of an advance copy of the addendum to the British Pharmacopeia, which we understand

will be published in the course of next week.

This is the fifth publication of a collection of official medicinal standards which have emanated from the General Medical Council since the Medical Act of 1858 conferred that responsibility upon it. First we had the British Pharmacopæia of 1864, a somewhat unhappy endeavour to unify the standards of the three kingdoms, and which had to be followed quickly by an entirely fresh Pharmacopæia in 1867, and "additions" to it in 1874. The Pharmacopeia of 1885 still seems new, but now we have here another thin volume of "additions." There has been no definite principle as to publication in all these years, but Professor Attfield has now placed one on record which, it may be anticipated, will be followed in the future—viz, to have a revision of or an addendam to the Pharmacopæia every five years, as the circumstances at the time may require. The mention of Professor Attfield's name recalls the fact that an officer of the Pharmaceutical Society has been associated with the General Medical Council in the preparation of all the Pharmacopæias. Professor Redwood was so associated until the 1885 edition, when a triumvirate, consisting of himself, Professor Bentley, and Professor Attfield, acted as editors. Since then the Medical Council has appointed the last-named as reporter on Pharmacopœial matters. It is unnecessary for us to speak of Professor Attfield's fitness for this work: his world-wide reputation as a scientist, his qualification as a registered chemist and druggist, and his personal characteristics, especially his tact and judicial experience, have naturally brought him to the position; and it is worthy of note that in this position the first thing he seems to have done was to remember his colleagues in pharmacy, using his influence to have them associated with the Medical Council in the compilation of the Pharmacopæia, with the result that for the first time the Pharmacentical Society of Great Britain was called in to assist in the work. It will be noticed from our report of the proceedings at the meeting of the Medical Connoil that Professor Attfield's services in this respect were gratefully acknowledged, and we observe that the seventh page of the addendum contains reference to the "valuable assistance in the preparation of the work from a committee of the Pharmaceutical Society of Great Britain,

Mr. M. Carteighe, President, Chairman

The Vice-President Inglis Clark, D.Sc. Mr. Ekin Mr. Gale Mr. H. G. Greenish Mr. N. H. Martin Mr. Martindale Mr. C. Umney."

"All's well that ends well," and with this introduction we may now proceed to dissect the offspring of the combined forces. The 1874 addendnm was a 24-page pamphlet; the pagination of the pre-ent one extends to 35, but it consists really of six pages of titles and prefatory matter, 23 pages of text, and one of appendix. The number of articles is 44—that is, an increase of seven over the list published in June last, the new articles being acetanilidum, adeps lank hydrosus, gelatinum, phenacetinum, pulvis sodæ tartaratæ effervescens, and Fehling's solution. An additional preparation of hamamelis makes the seven. Elsewhere in this issue we have criticised the contents of the addendum in a general way, and we reserve for future issnes any detailed criticism. We shall now briefly refer to each article of the addendum.

Acetanilidum. Acetanilide. C₈H₉NO.

This article is introduced on second thoughts, so to speak, and although it was found that the use of acetanilide was decreasing. It is noticeable that for the first time constitutional formulæ are introduced, that for acctanilide being given under the synonym, "Phenyl-acetamide, C₀H₅.NH.C₂H₃O." It is stated in a foot-note that "Acetanilide is commonly known as 'Antifebrin.'" The characters and tests given are similar to those of the German Pharmacopæia, the melting-

point being fixed at about 235° F., and the dose at 3 to 10 grains.

Acetum Ipecacuanhe. Vinegar of Ipecacnanha.

The ipecacuanha strength of this preparation (1 in 20) is the same as the vinegar of the British Pharmaceutical Conference Unofficial Formulary, but, instead of macerating the ipecacuanha in acetic acid, it is treated from the first with dilute acetic acid.

Adeps Lanæ. Wool-fat.

This is said to be the purified cholesterin fat of sheep's wool, and is a yellowish, tenacious, unctuous substance, having a melting-point varying from 104° F. to 111° F. (which is somewhat low). The tests given are those recommended by Liebreich. The substance is used for the preparation of

Adeps Lanæ Hydrosus. Hydrous Wool-fat.

This is a mixture of 7 parts of wool-fat and 3 parts of water, and in a foot-note it is mentioned that "Hydrous wool-fat is commonly known as 'Lanoline,' which is a registered trade-mark in the United Kingdom." To that we may add that the admixture of wool-fat with water is protected by patent in this country (No. 4,992, 1882), and as the owners of the patent have a keen appreciation of its value, it will be rather a risky thing for any chemist to make "Adeps lane hydrosus" of the British Pharmacopeia. It will be safer to buy lanoline.

Emplastrum Menthol. Menthol Plaster.

Made by melting 1 oz. of yellow wax and 7 oz. of resin together and dissolving 2 oz. of menthol in the mixture.

Eucalypti Gummi. Eucalyptus Gum.

This is the so-called red gum obtained from the bark of Eucalyptus rostrata, Schlech. The dose is 2 to 10 grains. No preparation.

Euonymi Cortex. Euonymus Bark.

The dried root-bark of *Euonymus atropurpurcus*, Jacq., which is described and is used in the preparation of

Extractum Euonymi Siecum. Dry Extract of Euonymus.

"This extract is commonly known as Euonymin." It is made by exhausting the bark in No. 20 powder, with a mixture of equal parts of rectified spirit and water (by percolation), distilling off the spirit from the percolate, mixing "so much sugar and milk with the still fluid extract—the actual amount having been ascertained experimentally—that the final product shall contain 80 per cent. of the dry extractive," evaporating and powdering. The dose of the extract is 1 to 4 grains.

Extractum Hamamelidis Liquidum. Liquid Extract of Hamamelis.

A 1-in-1 extract of the leaves of the plant, made with equal parts of rectified spirit and water, as directed by the B.P.C. formulary—viz., by percolating a first portion of 17 oz., reserving that, continuing percolation to exhaustion, and evaporating this to a soft extract, dissolving the product in the 17 oz., and making up to a pint with the menstruum. Dose, 2 to 5 minims. Used in making an ointment.

Extractum Hydrastis Liquidum. Liquid Extract of Hydrastis.

Made from No. 60 powder of the rhizome, like the above, and as directed in the B.P.C. formulary. Dose, 5 to 30 minims.

Gelatinum. Gelatine.

This is required for making glycerine suppositories. Characters and tests are given, the solution in hot water being required to be colourless and odourless; a statement which obviously requires qualification.

Glusidum. Gluside.

This article will be a mystery to many. It is the name which has been coined for the sweet imide derivable from the toluene of coal-tar and "commonly known as 'saccharin." Its synonyms are "Glucusimide; Benzoyl Sulphonic Imide, C_sH₁CO.SO_s,NH." In the course of the characters and tests, it is mentioned that the solution made by neutralising the substance with sodium bicarbonate yields on evaporation to dryness, "'soluble gluside' or 'soluble saccharin,' which is very soluble in water, 100 parts of gluside yielding nearly 113 of 'soluble gluside."

Hamamelidis Cortex. Hamamelis Bark.

The synonym of this drug is "Witch Hazel Bark," and it is the dried bark of *Hamamelis virginica*, Linn. Used for making a tincture, the fluid extract being made, as has already been stated, from

Hamamelidis Folia. Hamamelis Leaves.

For this the synonym "Witch Hazel leaves" is given, and a description of the leaves. It is obvious that the popularity of "Hazeline" has induced the officialising of the drug from which it is made; but we must again point out that "Hazeline" is a distillate from the fresh bark; so that the new preparations are in no respect its equivalent.

Homatropine Hydrobromas. Hydrobromate of Homatropine.

 $C_{18}H_{21}NO_3.HB_2$. Prepared from tropine. Dose, $\frac{1}{80}$ to $\frac{1}{20}$ grain.

Hydrastis Rhizoma. Hydrastis Rhizome.

Synonym, "Golden Seal." The dried rhizomeand rootlets of *Hydrastis canadensis*, Linn. Used for making tincture and fluid extract.

Liquor Cocainæ Hydrochloratis. Solution of Hydrochlorate of Cocaine.

A 10-per-cent solution, containing half a grain of salicylic acid in 6 fluid drachms. The recommendations made in papers by Messrs Jones and Helbing in THE CHEMIST AND DRUGGIST have evidently been studied, as a point is made of the water being boiled. The dose of the solution is 2 to 10 mimims—we presume hypodermically, although this is not stated.

Liquor Morphine Sulphatis. Solution of Sulphate of Morphine.

A 1-per-cent. solution—that is, 1 grain in 100 fluid grains, with spirit (1) and water (3) as solvents, the precaution as to exact quantities recommended by the editor in his report for 1889, and originally suggested by Mr. Colin A. Macpherson, being carried out.

Liquor Trinitrine. Solution of Trinitrin.

A 1-per-cent. solution of nitroglycerine in rectified spirit, with quite a host of synonyms—viz., "Liquor Nitroglycerini, Solution of Nitroglycerine, Liquor Glonoini, Solution of Glonoine." Dose, ½ to 2 minims.

Migassii Sulphas Effervescens. Effervescent Sulphate of Magnesia.

This is a granular preparation containing 50 per cent. of the snlphate. The dose is ¼ to 1 oz., and the preparation will be known also as "Magnesia Sulphas Effervescens, Effervescent Sulphate of Magnesia, Effervescent Epsom Salts."

Mistura Olei Rieini. Castor-oil Mixture.

A saponaceous emulsion of castor oil, flavoured with lemon, cloves, and orange-flower water, sweetened with sugar, and emulsified with solution of potash. Three drachms of castor oil in 1 cz. Dose, ½ to 2 cz.

Oleum Cadini. Oil of Cade.

This is a good old-fashioned remedy for certain skindiseases, whose popularity has revived of recent years. It is now introduced into the l'harmacopæia under the above

names, and also as "Huile de Cade" and "Juniper Tar Oil." Its specific gravity should be 0 990. It is made by destructive distillation from the woody portions of Juniperus oxyeedrus, Linn.

Paraldehydum. Paraldeliyde.

This well-known polymer of aldehyde $(C_6H_{12}O_3)$ is given in doses of $\frac{1}{2}$ to $1\frac{1}{2}$ fluid drachm. The characters and tests adopted are closely similar to those of the new German Pharmacopæia.

Phenacetinum. Phenacetin.

The introduction of this substance is an after-thought, and probably the fact that the German Pharmacopœia has recognised it may explain it. Phenacetin is stated to be "a crystalline substance produced by the action of glacial acetic acid on para-phenetidin, a body obtained from phenol." The constitutional formula is not given in this instance. The characters and tests are those of the German Pharmacopœia, with the exception of the last one (a potash and chloroform test).

Phenazonum. Phenazone.

"Phenazone is commonly known as 'Antipyrine' which is a registered trade-mark in the United Kingdom," and will also be known by the pharmacopæial synonym "Phenyldimethyl-pyrazalone $C_nH_5(CH_9)_2$ C_4HN_2O ," it being "a crystalline substance obtained from phenylhydrazine." The characters and tests given are again like those of the German Pharmacopæia, but in this case the isonitrons reaction is performed with sodium nitrite and dilnte sulphuric acid, instead of crude nitric acid alone, which the German Pharmacopæia requires, and the melting-point is 110° C, as compared with 113° C. given in the German Pharmacopæia.

Pierotoxinum. Picrotoxin.

It is not stated what this is, but it is obtainable from the seeds of Anamirta paniculata, Colebrooke, and is in colourless and inodorous prismatic crystals. Dose, $\frac{1}{100}$ to $\frac{1}{20}$ grain. The solubility of this neutral principle in cold water is remarkable: it is, B.P. 1 in 330; Martindale, 1 in 240; Squire, 1 in 150; U.S.P., 1 in 150. Which is right? Some of the tests given are from the last-quoted authority.

Pilula Ferri. Iron Pill.

The formula is from the BP.C. Formulary. It is stated that "this iron pill is commonly known as Blaud's Pill," which will in all likelihood snffice to protect the pill against medicine-stamp duty when it is called "Blaud's Pill."

Pulvis Sodæ Tartaratæ Effervescent. Effervescent Tartarated Soda Powders

"Commonly known as 'Seidlitz Powder.'" Professor Attfield had something to say of this powder in his last report, and he thought then of recommending Hoseason's suggestion to put 120 grains of Rochelle salt and 40 grains of bicarbonate of soda in the blue paper, and 40 grains of tartaric acid in the white, but 38 grains of the acid is now fixed upon as the standard.

Sodii Benzoas. Benzoate of Sodium. NaC.H.O..

The usual synonyms depending upon the old nomenclature are introduced. The salt is tested quantitatively by incinerating and titrating the residne with standard oxalic acid. Dose, 10 to 30 grains.

Sodii Nitris. Nitrite of Sodium. NaNO2.

With synonyms. A 95-per-cent. crystalline salt, to be tested by the nitrometer. Dose, 2 to 5 grains.

Sodii Phosphas Effervescens. Effervescent Phosphate of Sodium.

Granular, and containing the equivalent of 50 per cent. of the crystallised salt. Made in the same way as effervescent Epsom salts. Dose, $\frac{1}{4}$ to $\frac{1}{2}$ oz.

Sodii Sulphas Effervescens. Effervescent Sulphate of Soda.

Contains the equivalent of 50 per cent. of the crystallised salt. Prepared as above. Dose, $\frac{1}{4}$ to $\frac{1}{2}$ oz.

Stramonii Folia. Stramonium Leaves.

Restored from the 1867 Pharmacopæia, but with differently described "characters."

Strophanthus. Strophanthus.

"The mature ripe seeds of Strophanthus hispidus, D.C., var. Kombé, Oliver, treed from the awns." That settles the matter about the origin of the seeds so far as we are concerned. The important points to note in regard to the description are that the seeds should be $\frac{a}{b}$ in long and $\frac{1}{b}$ in broad, greenish fawn in colour, and covered with appressed hairs. The seeds are used for making the tincture.

Sulphonal. Sulphonal. C7H16S2O1.

"Diethylsulphon-dimethylmethane (C.H_a)₂C(SO₂C₂H₃)₂." The "characters and tests" are almost identical with those given in the German Pharmacopæia, but the latter says sulphonal is soluble in 135 parts of ether; the B.P. says "readily soluble."

Suppositoria Glycerini. Glycerine Suppositories.

A mass is made of glycerine, gelatine, and water, which contains 70 per cent. of its weight of glycerine, and it is divided into suppositories of 30, 60, and 120 grain measures respectively.

Syrupus Ferri Subchloridi. Syrup of Subchloride of iron.

This "syrup of ferrous chloride" contains about $4\frac{1}{4}$ grains of anhydrous ferrous chloride in each fluid drachm. It is made from iron wire and hydrochloric acid, sugar, and distilled water, a little citric acid being added to preserve it. The syrup has a local reputation in Scotland, but the Pharmacopeeia preparation is twice the strength of the one for which a formula by Mr. William Gilmour was originally published in The Chemist and Druggist in 1881. The dose is $\frac{1}{3}$ to 1 fluid drachm.

Tinetura Hamamelidis. Tincture of Hamamelis.

Tinetura Hydrastis. Tincture of Hydrastis.

The B.P.C. formulæ are adopted for these, which are 1-in-10 tinctures made with proof spirit by percolation.

Tinctura Strophanthi. Tincture of Strophanthus.

This is also the B.P.C. formula, the strength being 1 in 20, and the menstruum rectified spirit. The seeds are first washed with "pure ether," or, as stated in a footnote, "with commercial ether' free from alcohol and water." That means the article made from methylated spirit, which, by the way, should differ in no respect whatever from ether made from rectified spirit.

Trocbisci Sulphuris. Sulphur Lozenges.

Each lozenge contains 5 grains of precipitated sulphur and 1 grain of cream of tartar, as recommended by Sir A. B. Garrod, M.D. Tincture of orange-peel is used as the flavouring.

Unguentum Conii. Ointment of Hemlock.

Made by evaporating 2 oz. of hemlock juice to 2 drachms, and mixing with $\frac{3}{4}$ oz. of lanoline and 10 grains of boric acid.

Unguentum Hamamelidis. Ointment of Hamamelis.

A mixture of 1 part of the liquid extract and 9 parts of simple ointment.

Solution of Potassio-Cupric Tartrate.

"Commonly known as 'Fehling's Solution." The formula for this constitutes the appendix. It consists of two solutions made with distilled water:—No. 1, 346 4 grains of sulphate of copper in 5,000 grain measures. No 2, 1\frac{3}{4} oz. of caustic soda and 4 oz. of tartarated soda in 5,000 grain measures.

Copies of the Addendum may be expected to be on sale by the publishers, Messrs. Spottiswoode & Co., Gracechurch Street, London, after the middle of December.

PHOTOGRAPHIC NOTES.

(Written for THE CHEMIST AND DRUGGIST.)

A COMBINED EIKONOGEN AND HYDROQUINONE DEVELOPER.

The following formula was recently given to the Parisian Photographic club, and, after trying it, we think it will be found very useful for amateurs, and might be well put up as a universal one-solution developer:—

It is a well-known fact that eikonogen and hydroquinone developers act best at a fairly high temperature. The Parisian Club recommends a temperature of 30° C. $=86^{\circ}$ F.; this, however, will be found rather higher than is safe with rapid plates, the limit being from 76° to 80° F.

PHOTOGRAPHERS AND CHEMISTRY.

The statements sometimes made by photographic journalists about chemicals and chemistry are highly amusing. Whilst writing these notes we have received a journal containing notes on chemistry; and the writer, in speaking of carbonate of soda, says: "The common washing soda is useless, but the monosodium carbonate or sodium hydrogen carbonate (NaHCO3) is the source of the commercial bicarbonate of soda." Presumably the writer knows what he means, but this is beyond us. Again, another writer states that Beaufoy's acetic acid is always impure, which is more than a perversion of the truth. The same gives the formula for commercial carbonate of ammonia as $(NH_4)_2OO_3.H_2O$, and states that it "reddens litmus blue." "Smelling-salts" is given as a synonym for ammonium chloride, and "coal-tar" and "creasote" as synonyms for carbolic acid. When it comes to chemical equations, "confusion becomes worse confounded."

IRIDIUM PAPER.

Iridium is a metal belonging to the platinum group, and is found alloyed with osmium in platinum ores, and also sometimes found associated with gold in California. It is a white metal, somewhat resembling steel—but more brittle—at atomic weight 1932(?), sp. gr. 21·15, symbol Ir. It is obtained by dissolving platinum ore in aqua regia, iridosmine, the alloy, being left as a residue, which is fused with chloride of sodium, forming chlorides. On heating the mixture with nitric acid, osmic acid is evolved, and the chloride of iridium is precipitated by adding chloride of ammonium. Chloride of iridium has been used for toning photo-ceramic enamels, and now we are promised a printing-out paper with chloride of iridium as the sensitive salt, which gives a fine blue-black print, rivalling platinotype, it is said. But with potassio-chloride of iridium at about 18s. per drachm, we doubt if auyone is likely to use much of it. The formula for potassio-chloride of iridium is stated to be IrCl, 2KCl.

PLATINUM RESIDUES.

In the face of the present high price of platinum, residues and "washes" of this metal are well worth working up. The old developing-baths for platinotype paper, odd bits of the paper itself, spoilt prints, &c., all may be reworked. Old developers may be treated with saturated solution of sulphate of iron—1 part of the saturated solution to 4 parts of the developer will be about right; the mixture should be heated to boiling in a porcelain dish and the precipitated metal collected on a filter. Bad prints, clippings, &c., of the paper should be placed on a tin or iron plate and burnt, the ashes collected and digested for some hours at 50–70° C. with aqua regia, and then the solution diluted with an equal volume of water and the platinum precipitated with iron as above, or with ammonium, or formate of soda, or any other reducing agent.

CASCARA SAGRADA AND ITS ALLIES.

NE of the most interesting papers communicated to the recent meeting of the American Pharmaceutical Association was that by Dr. H. H. Rusby, the well-known hotanist, on cascara sagrada and its allies. The paper had reforence chiefly to the close similarity between the park of Rhamnus Purshiana and the barks of nearly allied species. So close is this resemblance that it is questionable if any cascara sagrada has ever come into the market from certain districts which is not a mixture. We cannot assume, Dr. Rusby says, that gross carelessness has been displayed. The cause is to he found in the natural difficulties attending the selection and identification of the material. If the collector encounters a locality where the plants are typical, or of a variety diverging from the alternative species, no difficulties are presented. But if he happens to encounter some of the intermediate forms, he should not be too sharply reproached for falling into error. Even accomplished botanists who have written special treatises on these plants have done as much. Thus Mrs. T. S. Brandegee wrote as late as 1888: "All our forms (of R. californica), running together, seem also to run into R. Purshiana;" and Professor William Trelease, of the Missouri Botanical Garden, writing a year later, says: "In the broad-leaved form (of R. californica), distributed and described by Howell as R. occidentalis, from Oregon, . . this species appears to range further northward than usual, and to approach the preceding (R. Purshiana). Indeed, some herbarium specimens are hard to place." Dr. Rusby himself recently detected in one of the largest herbaria a sheet of R. Purshiana which had passed for a generation under the eyes of the botanists as a form of R. californica. Under such circumstances it is only the most able and experienced collectors who can, in certain localities, collect the genuine cascara sagrada solely, and we can expect nothing else than that more or less spurious material will get upon the market. At times the proportion of such bark has been very large, while again there would be, for a time, but little of it seen. Provided that it is once collected, whether mixed with the genuine or offered separately, the ordinary huyer is quite unlikely to detect the error.

Dr. Rushy submitted specimens to the meeting in proof of his statement. He relies mainly upon the leaves and flowers to guide him in naming the species from which any hark submitted to him has been derived, as no chemical test of any discriminating value has yet been found. It so happens, however, that the only trees which resemble each other in respect to hark are Rhannus Purshiana and R. californica, with its variety (probably a true species) tomentella. R. Purshiana occurs only sparingly in Texas, Colorado, New Mexico, Arizona, and Southern and Central California (where R. californica is most ahundant), but becomes more plentiful in Northern California, and most of all in Oregon and Washington. *R. californica* exists very sparingly as far north as North California; it seeks the southern districts, as will be seen, and it is the hark from those districts, especially the south and centre of California, about which we should become most suspicious. Rusby describes the botanical characteristics of different plants, and gives drawings of the leaves and flowering branches, which we reproduce in reduced facsimile from the Druggists' Bulletin. It is in the leaves that we find the chief distinguishing characters Those of R. Purshiana are from 2 to 6 inches long, broadly elliptical, the base occasionally slightly cordate, hut generally rounded or very slightly produced, and the apex rounder very slightly pointed. The margin varies from nearly entire very slightly pointed. to very slightly crenate and finely serrate. They are deciduous, thin and veiny, green both sides, but somewhat paler helow. The lower surface is densely and softly hairy, the veins hirsute. The upper surface is softly hairy when young, but hecomes smooth, or nearly so, except with the strong channel along the midrib, which remains reddish or whitish hirsute. The leaves of *Il. californica* reddish or whitish hirsute. The leaves of R. californica are very distinct. Those of the var. tomontella are strongly whitish-downy underneath and may be at once distinguished, so that it is only the typical form with which we are especially concerned. Its leaves are only half the length

of the last, clliptical oblong to ohovate, rounded or slightly heart-shaped at the base, and commonly short-pointed, but often rounded, at the apex, the margin varying from doubly serrate to almost entire. They are thick and persistent, generally evergreen, varying from smooth to pubesceut, but the pubescence short and close, and not at all the hairiness of *Ik. Purshiana*. The under-surface is strongly reticulate, reddish-veined, and the primary veins not nearly so numerous, straight, or fine, as those of *Ik. Purshiana*. Ahove, the channel of the midrib is shallow and inconspicuous, and smooth within, or there may be none. This channel of the midrib is an excellent characteristic.

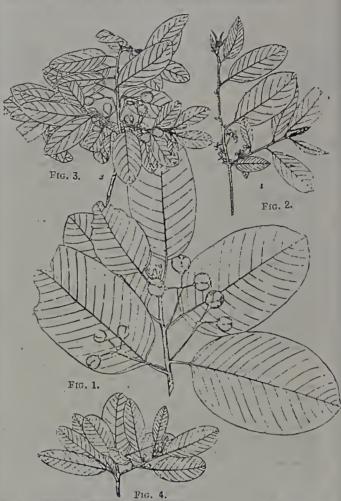


Fig. 1.—Fruiting Branch of Rhamnus Purshiana, DC. Fig. 2.—Flowering Branch of R. californica, Esch. Fig. 3.—Fruiting Branch of same, Fig. 4.—Flowering Branch of R. tomentella.

The above illustrations fully show the characteristics of the leaves. Coming now to the bark itself, the external appearance is not altogether reliable, for R. Purshiana hark often becomes covered with lichens which hide the natural colour. The exterior of R. californica bark is grey, but the former is more of a lustrons red, except when old. This eolour appears to be deepened in some specimens grown on humid, low land, and to give way to a greyish colour, slightly resembling that of R. californica, in those grown upon the upland. Upon the periderm of hoth varieties, when young, occur numerous transversely elongated white or light dots. In R. californica they are far less numerous and are early lost, while in R. Purshiana they persist for many years. All these characters, as stated, are more or less hidden by the growth of lichens, but it is noteworthy that these lichens in R. Purshiana tend to grow in conspicuous silvery patches, while in R. californica they frequently form a more uniform covering. There is but little advantage in studying the inner surface, which in both is marked by fine strim and blister-like papilla, the latter heing commonly much more numerous, or prominent, in R. californica.

It is in the structure of these banks as revealed by the microscope that we find our unfailing guide to distinction

The characters and arrangement of the hast-bundles, resinareas, and medullary rays, form quite as good evidence as do the leaf-characters above detailed, and guide us to the recognition of the harks alone, which the leaf characters cannot do.

The general structure of both exhibits mednllary rays supported on each side with small bast-hundles, circum-

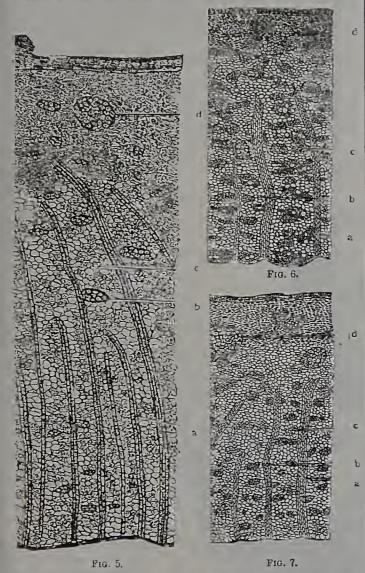


Fig. 5.—Transverse Section of Bark of R. Purshiann: a, medullary rays b, bast-bundles; e, groups of parenchymatic cells containing particles of a blackish resin; d. large yellow areas (schlerenchymatic cells). Fig. 6.-R. californica, the same. Fig. 7.-R. tomentella, the same. All magnified about thirty diameters.

ferentially elongated, of an elliptical form. Of these there are sometimes two, side hy side between two medullary rays, while at other times a single large one reaches from one medullary ray to the other. In R. californica they are more likely to occur in pairs. At the region where the medullary rays terminate, and extending from there to the corky layer, hegins a zone of very large resin-spaces (schlerenchyma) of variable size and form, hat many times larger than the bast-hundles, which in appearance resemble them very closely indeed. The general features present the following variations in the two harks on tranverse section. The inner margin of that of R. Purshiana is even or only slightly wavy, while in that of R. californica it is quite regularly and strongly crenate—a crenation corresponding to the extremity of each mednllary ray. Apparently these crenations correspond to the blister-like elevations to he ohserved upon the inner surface. The medullary rays in R. Purshiana are numerous, thin, and run on an average fully three-quarters of the distance across the bark. From the inner margin to ahout the middle of the bark they run pretty straight and parallel, hroadening markedly as they They consist commonly of two rows of cells. R. californica these medulary rays are not more than half | free acid. The other factors must be taken into account.

so numerous, and they are twice as broad, running on an average not more than two-thirds the distance across the hark, the shorter ones heing very short. They are crooked and non-parallel from the first. They consist commonly of three or more rows of cells. Considering the inner hark as extending only to the extremity of these medullary rays, we find that the outer bark is the area or zone in which occur chiefly the large resin-spaces already alluded to. It will thus be apparent that this zone of resin-spaces in R. Purshiana occupies only in about one-fourth the total breadth of the section, while in It. californica it represents nearly one-third of it. Not only is this the case, but the resin-spaces within the area in the genuine bark are irregularly and rather loosely and sparsely distributed, while in R. californica they are large, numerous, and thickly distributed, a zone near the cork heing particularly occupied hy long and narrow ones. The bast-hundles are quite similar in both, but in R. Purshiana they are, owing to the greater number of the medullary rays and the narrow spaces between them, considerably smaller and more numerous. The longitudinal section presents no special characteristic

COD-LIVER OIL.

 $m D^{R.~H.~UNGER}$, of Würzburg, called attention in 1888 to the characteristics of three samples of cod-liver oil representing the three principal qualities. It appeared from his note then that the dearest oil was of sp. gr. 0 928, contained 1.69 per cent. of free acid, and gave a distinct ring of albumen when poured upon nitric acid. The cheapest oil was of sp. gr. 0 925, contained 4.78 per cent. of free acid, and gave no albumen ring. A middle class oil was of sp. gr. 0.929, gave no albumen ring, and contained 7.33 per cent. of free acid. A year later the first sample was practically unchanged, but the second contained 6.76 of free acid, and the third 7.47. The best oil still gave the alhumen ring, the others did not. Dr. Unger continues his notes in a recent issue of the Pharmaceutische Zeitung, more especially addressing himself to the natural acidity question, Nagel-voort having reported that he had found five samples of absolutely neutral oil, and that that is what pure oil should be. He examined last year four samples of fresh Lofoden oil, with the following results :-

-	Finest Oil	Pale	Somewhat Darker	The Darkest
Sp. gr. Free fatty acid With 1400 nitric acid	0.926 Neutral Beautifulring after 3 hours	0.923 4.37 Feeble ring after 2 hours	0·9235 6·76 No ring	0.923 8.49 Ring after 2 hours

After keeping these samples for a year in closed bottles, they were again examined, with the following results:-

_	Finest Oil	Pale	Somewhat Darker	The Darkest			
Free acid	0.564	5·92	7·05	9-625			
Albumen ring	Very distinct	None	None	Only slight			

The specific gravities in the above cases were taken at 11° C. It is evident from these results that there is some connection between the albumen and the free fatty acid, the latter serving to precipitate the former, so that in the case of oils which contain a good percentage of the acid, the albumen is gradually precipitated, and nitric acid reacts but feebly. Dr. Unger is further inclined to believe that the 1889 were not very good, and that this year's oils are much better. One sample which he has examined, and which had good body and flavour, and was naturally clear, showed a specific gravity of 0.927 at 10° C., 3.38 per cent. of free acid, and gave an albumen ring. It would seem, therefore, that we must not condemn an oil simply because it contains

KOCH AND TUBERCULOSIS.

PROFESSOR ROBERT KOCH, whose portrait we publish L to-day, is a man still on the bright side of fifty, he having been born on December 11, 1843. He is a native of Klausthal, a town in Hanover. Koch studied medicine at the University of Gottingen, and after graduating he was appointed an assistant-surgeon at the General Hospital of Hamburg. It was not until 1872 that he began bacteriological study with any earnestness. He was then acting as a district surgeon, but he was very soon promoted to be a member of the Imperial Board of Health, for which his growing reputation as a bacteriologist had naturally singled him out. It is to Koch we owe the colour method for the detection of micro-organisms, he having noticed that one organism may he coloured by a dye which does not affect others, or degenerated tissue, so that he, by this means, established

a process of selection not otherwise possible with the hest ocular resources. The method enabled Koch to discover the tubercle hacillus in 1882, and some time later he also discovered the "c mma" bacillus, which he helieved to he the specific organism of cholera. This discovery was made while he was acting as director of the German Cholera Commission, which visited Egypt and India. Pro-fessor Koch now holds the appointment of Professor of the Institute of Hygiene in Berlin, and it is in this capacity that he has had the leisure to prosecute the studies which have resulted in the discovery of his " curc" for tuberculosis.

THE PRUSSIAN MINIS-TER FOR MEDICAL AF-FAIRS, Dr. von Gossler, has announced on hehalf of the Government that the State would give its authoritative approval to Dr. Koch's treatment. Speaking of Dr. Koch as a "benefactor of mankind," he said there would be no danger of any financial exploitation of this great medical boon. The cheering in the House was

loud and general; the "strangers" in the galleries joined in, and, breaking loose from self-control, the newspaper representatives assisted to swell the prolonged applause. Dr. von Gossler, in the course of his statement, explained that after arduous researches, extending over six weeks, it was found that the lymph could he supplied at a cost of 25m. per 5 grammes. A phial contained sufficient for 5,000 inoculations, each of which cost 5 pfcnnige $(\frac{1}{2}d)$.

THE FLUID is now heing employed in some of the London At the Throat Hospital, Golden Square, Sir Morell Mackenzie has treated three patients by the injection of Koch's fluid. The patient in the first case was a man aged thirty one, the two latter were youths aged respectively eighteen and sixteen. The mother liquid in appearance is something like Valentine's meat juice. Sir Morell showed that for injections solutions were made from the mother liquor by adding ten times as much distilled water, with the addition of half per cent. of carbolic acid to prevent decomposition. A quantity of the solution equalling a centigramme of the original fluid was used; on the younger ones

a milligramme. Sir Morell remarked that if the discoverer himself was unable to produce the fluid with mathematical certainty, how much more likely was it that, if he published his process before it was absolutely reliable, solutions of a most uncertain character would be produced by other pathologists! and dangerous results might follow if doctors began injecting, as they undoubtedly would, with such solutions. Koch's fluid is believed to be a chemical solution of an albumenoid character, produced by bacillar action, and is probably analogous to the liquid used by Professor Pasteur for injection in hydrophobia cases. Sir Morell pointed out that Professor Koch did not claim to cnrc every case of lupus or consumption by a single series of injections, but only to destroy the tissues in which hacilli live, and thereby clear the system of them. It was therefore important that the patient should have good air and good food, but even with this, owing to heredity and other causes, the morbid tis-ue may again form, and many more injections he necessary before the evil is eradicated.

HEBR VON BLEICH-RODER, the Berlin banker and British Consul, has placed 1000,000 marks at the disposal of Dr. Koch for the founding of a hospital for the treatment of tuberculous sufferers. He also offers a piece of land for the site of the hospital. A. new hospital for treatment by the Koch method is to be established at Munich by a jointstock company at a cost-of 2,000,000 marks.

EXPERIMENTS IN EDINBURGH. - Through the personal kindness of Professor Koch, a small heen placed at the dis-Dispensary for Consump-Stewart and Dr. Brackenridge. far are satisfactory.

quantity of lymph has posal of the physiciansof the Royal Infirmary through Dr. R W. Philip. F.R C.P., of the Victoria tion and Diseases of the Chest. Dr. Philip has got private wards in the infirmary, and the cure has also been used on patients under the charge of Professor Grainger The results so-

THE following motion placed upon the agenda of the Legislative Assembly of Lower Austria by Deputy Fuss is a specimen of Continental gush in regard to the discovery :- "Hundreds of thousands of human beings, permeated by feelings of sincere admiration, now acclaim the German scientist who, through the message of salvation carried from the capital of the United German Empire to all points of the compass. and proclaiming the epoch-marking victory of German science over one of the most terrible scourges of the human race, has proved himself a benefactor of mankind in the noblest sense of that phrase. From all countries of the globe prominent representatives of the medical science flock to Berlin to be initiated in the curative system of the genius who has cast out to numberless afflicted persons, hitherto doomed to desperation, that anchor of salvation which promises the hope of recovery of the highest boon of mankind-Health. In the confident expectation that at the present juncture, when the Empire, the principal communes, and even a large number of private persons are taking measures commensurate with the immense historic signifi-

cance of the newly-published discovery, the ancient and



DR. KOCH.

venerable cradle of the Austrian monarchy shall not stand aside without participating in the event: This Landtag resolves to instruct a committee (1st) to take measures for sending to Berlin, at the expense of the Landtag, a trained expert, for the purpose of studying the remedy and the process for the cure of tuberculous diseases just discovered by Privy-Councillor Professor Dr. Robert Koch; (2nd) with due speed to propose to the Landtag such measures as can be suitably taken by it for the efficient promotion of the quickest possible application of the blessed discovery within the Lower Austrian dominions."

A WEIGHTY CRITICISM appears in the Fortnightly Review for December. It is written by Dr. Berdoe, whose prominent connection with the Anti-Vivisection Society is assurance, no doubt, of a bias against the cure, but whose arguments are none the less effective, notwithstanding. Dr. Berdoc first briefly sketches the numerous and contradictory deductions which the most eminent pathologists have drawn from experiments on animals. Koch's theory is based on the theory that the specific morbific agent of tubercle is a bacillus. Heneage Gibbs, however, has declared that the bacillus cannot be found in the early stages of tuberculosis. Lormis has found the bacillus in healthy bronchial glands. Villemin, Simon, Andrew Clark, and others have asserted that the specific poison of tubercle can be communicated from one animal to another. Burdon-Sanderson, Wilson-Fox, Cohnheim. and other investigators have satisfied themselves, on the other hand, that by inserting setons of cottonthread, cork, paper, gntta-percha, in the body, they have produced tubercular disease in animals. Dr. Berdoe gives further records of opposing opinions from the vivisectionists. Then he briefly condemus the Pasteurian prophylactic against hydrophobia, quoting the Pasteur and Koch crazes as evidence of the proneness of the world "to take its benefactors by force and make them by turns its kings." He exonerates Koch himself from the charge of hurrying forward his cure, but points out that he had made his first injection to a human being only eighty days ago, that he had himself stated that the effects were very different on men to what they are on gninea-pigs, that even if the lymph will do all that is claimed for it, it is far too early yet to assume that the effect will be permanent, that the dead tissne which it is said to produce may itself be a new source of danger, and that very probably terrible disappointment awaits sufferers who have placed too much faith in the promises of the irresponsible portion of the press. With regard to the reasons given for keeping the composition of the remedy secret, he asks, "Is it possible that a man of science so eminent as Dr. Koch is using, and permitting a great number of other physicians to use, a remedy the manufacture of which is either not perfected or not explainable to other bacteriologists?" Then he tells the story of Koch's alleged discovery of the "comma bacillus," which was announced half-a-dozen years ago as the cause of cholera. Koch's discovery of this was seriously discredited by many other eminent bacteriologists. Dr. Berdoe at least proves that it is as yet too early to sound preans of victory over the terrible disease.

PHOTOGRAPHIC WASTE.—A Chicago photographer calculates that 10,000*l*. worth of silver and gold is wasted by photographers in his city yearly by not working up washings, &c. "Could all this waste for the past twenty-five years have been saved it would have amounted to the enormous sum of 2,500,000*l*." We fail to corroborate the calculation, but it was worth saving anyway.

THE DRUG TRADE OF SMYRNA.—Nearly one half of the 200,000 inhabitants of Smyrna are Greeks, and there are also many thousands of Armenians and Jews. The drug trade with the interior is mostly in the hands of Greeks and Armenians, and the export to Europe is carried on mainly by European merchants, including a large number of Germans. In addition to opium, mastic, tragacanth, seammony, storax, and soap-root, liquorice-root (about 100,000 bales per annum), liquorice-juice (about 8,000 eases), and salep are among the drugs exported. Pharmacies abound in Smyrna, most of them small and shabby, but some in every respect equal to Western ideas, and conducted by qualified pharmacists.

AT THE COUNTER.

KNOWLEDGE IS POWER, BUT NOT ALWAYS SATISFACTION.—Country Customer (looking at back of her hand through a 1d. microscope): "Oh, law, if that's my skin I never wans to look through them things again," putting down the microscope and rushing out of shop.

Customen: "Please for 3d. of glass eyes."
Chemist: "Glass eyes! We don't keep them. What are they for?"

Customer: "To put in wine."

Chemist: "Oh! now I know what you want. You mean isinglass."

"TINKERS OF MIRTH FOR TOOTHACHE" is an original demand sent to Mr. Brooks, of Whitby.

A SCOTO-AMERICAN.—Boy: "Mister, I want to get a um-1-want a pint of a thunder-I forgot." Druggists's Clerk: "Little man, have you forgotten what you cam' for?" Boy: "That's it!" Clerk: "What's it?" Boy: "Camphor."

A MAN went into a shop at Birmingham and asked for a square foot of "Pontius Pilate." He was supplied with spongio piline.

FROM SOUTH LONDON.—"Please, sir, grandfather's got the 'hairy slippers,' and mother says would a Spanish onion hurt him for supper?" Our correspondent diagnosed the disease as erysipelas.

RUBAL LOGIC.—Mr. Smart, Littlehampton, reports the following conversation between two middle-aged country women in front of his counter the other day.

1st. C. W.: I was that sick and bad and father he says 'tis boil. I heats a hegg for my breakfast every day and he says they makes boil, but it can't be always boil because I'm bad so often.

2nd. C W.: Well, my husband has rheumatiz in his showder and 'tis always rhematiz with he, so I don't see why it shouldn't be always boil with yon.

The Gossiper of the Glasgow Evening News undertakes to show what a blessing to the public are the high prices charged by chemists. "An old lady," he says, "went into a drug-store in a poor district of the city the other day for a pennyworth of salt of sorrel to remove rust stains from linen. The chemist carefully weighed out the stuff, and handed it to the ancient dame, who looked at the tiny package in a very uncomplimentary fashion. 'It's poison, remember!' said the man of pills, warningly. 'Eh?' said the old lady, who was a little hard of hearing. 'It's poison,' repeated the druggist in a londer tone. 'Is it indeed?' rejoined the old party, with a most unladylike sneer; 'a'm thinking if a' wis' tae swallow a' that's there, it wadna' dae me much herm!'" The seller was qualified, but he had no retort ready for this occasion.

- J. P. sends us the following from a Surrey town:— "Lamper prelatial lime." Being interpreted, this turned out to mean "Lamplough's pyretic saline."
- J. C. (DIGBY, NOVA SCOTIA) sends the following item:—
 "While my clerk was weighing some cyanide for a
 photographer, a woman standing close to the scales took
 a piece and put it in her mouth, thinking probably that it
 was candy; the clerk, however, forced her mouth open with
 one hand, while with the other he grabbed the poison. It
 was all done in an instant, but was a narrow escape."



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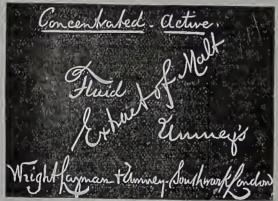
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See First Page, facing inside of front of cover, in this Issue for latest particulars.





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ADDITIONS TO THE BRITISH PHAR-MACOPŒIA OF 1885.

MUCH interest attaches to the thin volume comprising thenew additions to the Pharmacopæia. In one respect its publication marks a red-letter day in the history of British pharmacy, as now, for the first time, has the Pharmacy,

maceutical Society co-operated with the Medical Council, and had a share in the production of the book which governs and directs the operations of pharmacists. It is no doubt true that professors connected with the Society have already acted as editors: but they did so on their own account, and not as representing the Society. It is, therefore, with no little anxiety that the pages will be scanned to see how pliarmacy appears in its new alliance. The first feeling is one of disappointment, for in many cases the additions seem to have little or no raison detre. The purely pharmaceutical additions are few in number, consisting of one acetum, one emplastrum, three extracta, three liquores, one mistura, one pilula, one syrupus, one suppositoria, three tincturæ, one trochiseus, two unguenta, and several effervescing preparations. It cannot, therefore, be said that the committee has been sorely burdened in devising formulæ for these, and a higher standard of excellence will all the more be looked for. Time and experience will alone show how far the various formulæ will produce satisfactory preparations, and any weak points will no doubt be soon detected by the many young pharmacists anxious for fame. We therefore do no more than indicate the general impression produced by a brief examination of the formulæ. On the whole, these are satisfactory; but it is quite pertinent to ask why the committee has not made an effort to at least commence a series of tinctures founded on correct scientific principles, instead of blindly following the rule of the Pharmacopæia in adopting proof or rectified spirit, whatever the drug. The tincture of strophanthus is, of course, an honourable exception, and we are glad to see in this connection that common sense has prevailed over red-tapeism in the loophole which admits the use of ether prepared from methylated spirit, for the purpose of removing fat from the seeds, but the use of ether might have been done away with, had seeds freed from oil by pressure been used. The extractum euonymi siceum is a step in the right direction, and bears internal evidence of being based on correct principles. This extract is to be taken as the representative of euonymin, and it is intended to supplant the various and variable preparations at present passing under that name. The liq. cocain. hydrochlor. contains a small proportion of salicylic acid, sufficient to prevent decomposition, but too small a proportion to cause irritation. The castor-oil mixture is virtually a soap flavoured with lemon and cloves, and we mistake very much if it will meet with general approval. The Blaud's pill is similar to that adopted in the B.P.C. Formulary—the formula being suitable for ordinary dispensing quantities.

Passing from the pharmaceutical preparations, no fewer than seven organic compounds are introduced, some of which are already known in trade by private or registered names. To avoid the use of these private titles new names have been coined, apparently derived from the lengthy scientific terms indicating the supposed constitution of the bodies. The organic compounds are, acetanilide, antipyrin, paraldehyde, picrotoxin, sulphonal, saccharin, and hydrobromate of homatropine. It will appear to many that the new names for antipyrin and saecharin are more likely to raise a smile than to ease the conscience of any doctor who wishes to order a patented article, but only, of course, under a learned name. The practice of introducing into the Pharmacopæia articles which are, to all intents and purposes, private property, seems to be on the increase; for we also find lanoline under the guise of adeps lanæ hydrosus. It is, of course, plain from the "characters and tests" that the pharmacist is not bound to use anhydrous lanoline for "adeps lanæ," since any purified sheep's-wool fat answering the tests will suffice; but the distinct reference to lanoline under "adeps lanæ hydrosus" indicates that a special article is

intended, for there is only one "lanoline," and that is Liebreich's. Moreover, as pointed out elsewhere, the admixture of wool-fat with water is the subject of a patentiwhich no Pharmacopæia can invalidate. A more formidable legal process would be necessary for that. Lanolineis made official for its own sake, and also for making one ointment. The effervescing preparations—sulphate of magnesium and the phosphate and sulphate of sodium -contain 50 per cent. of the respective salts, and, it is presumed, are really intended to produce powerful results. We do not believe that they can, to any extent, displace the less active but more palatable preparations of these salts which are current in the market. The two new ointmentsviz., hamamelis and hemlock-appear to be redundancies which are not likely to have emanated from the Pharmaceutical Committee. Taken as a whole, there is no reason to be ashamed of the work done in connection with these additions, although there are points in which improvements might have been made. In any future Pharmacopæia the abolition of explanatory paragraphs indicating the origin of organic substances might be insisted on-such as, for instance: Sulphonal may be obtained from a mixture of mercaptan and acetone by suitable chemical treatment. Here the attempt to give information reminds one strongly of the kind of answer given by students crammed for an examination, although in their case a more detailed account would be forthcoming. On such matters we apprehend that the Bloomsbury committee had not a free hand, and felt bound to perpetuate the defects of the Pharmacopceia.

To-day we give a complete abstract of the contents of the addendum, and from that it will be seen that the recently-published German Pharmacopæia and the Unofficial Formulary of the British Pharmaceutical Conference have been drawn on to a large extent. It will give great satisfaction to many that the latter work receives this official recognition, especially so full recognition, as in one instance only has alteration been made, and that on a formula to make it conform with Pharmacopæia methods. Pharmacy has thus every reason to be satisfied with her share in the preparation of the addendum. Apparently the Pharmaceutical Council is, for on Wednesday, when the matter came before them, every member—from the driver down to the weakest hack of the team—was frisky with the enthusiasm engendered by the appreciation of the more august Oxford Street body.

SPECIAL HOSPITALS.

The Select Committee of the House of Lords, which has been investigating the charity administered in metropolitan hospitals, had it in evidence that there are in the London area nineteen large general hospitals and sixty-seven institutions of a special character. The latter list, however, comprehends not only hospitals for special diseases, such as the Eye or Throat Hospital, but others for special patients, such as the German and French hospitals, and also institutions where a special kind of treatment is followed, as in the Homcopathic Hospital. We notice in the classification given by Colonel Montefiore, the organising secretary of the Medical Committee of the Charity Organisation Society, that the London Temperance Hospital is included among the nineteen general establishments, thoughit would seem to be almost as special as the Homcopathic.

One of the issues most keenly contested before the committee is evidently the question of the right of special hospitals, strictly so called, to be included among the charitable institutions of the metropolis. The Charity Organisation Society complain that "year by year new hospitals are (sometimes.

under very doubtful auspices) established for the treatment of special diseases without any reference to the provision already available." Some of these, Colonel Montefiore says, are started simply as a matter of business; some have been bought and sold, and are still carried on as charities. They all appeal to the public for funds. Small hospitals must be more costly than large ones to carry on, and it is not unlikely that cortain special diseases may involve unusual expenses. But, allowing for such, the cost per bed still seems to be rather out of proportion at the special hospitals. As we showed recently, the cost of an occupied bed in the poor-law infirmaries of London is estimated at 35l. per annum; at the general hospitals it averages about 90%. At two hospitals for epilepsy the cost is 143l. and 146l. respectively. At the Gordon Hospital for Fistula it is 1501.; and at St. Peter's (for Stone)—a paying hospital—it is 2851 Mr. Timothy Holmes thinks half the special hospitals could be abolished, and no one having any reasonable claim to gratuitous treatment would be any worse off. Mr. Nelson Hardy agrees with this, but says the proportion to be suppressed might be three-fourths. Both, however, admit, and so does Colonel Montesiore (representing the Charity Organisation Society), that excellent work is being done at some of these institutions. And no one can suggest any principle on which the unworthy once can be distinguished.

This, according to Mr. Nelson Hardy, is how a special hospital is, or may be, got up. A medical man who wants to secure fame and reputation gets a few friends together, and forms a committee. Then a young man who has not much to do is found to work the thing. He issues advertisements pointing out that such a hospital has long been wanted and would supply a great void; that the staff is the most capable ever known for treating diseases of women, of children, of the eyes, of the nose, of the toes, or of some other part of the body. It is arranged that the secretary shall receive a certain proportion of the receipts, a friend advances some money, an old tumble-down house which no one would rent otherwise is taken, a few beds are put in it, an out-patient department is opened, and the thing is done.

Now we may turn to Sir Morell Mackenzie's evidence, which is largely devoted to the defence of special hospitals. Sir Morell Mackenzie was a student, and subsequently on the staff, of the London Hospital; he was also the founder of the Throat Hospital in Golden Square. He thinks both general and special hospitals are required. The former have, it is true, to some extent, established departments for special diseases, but they have not been so successful in treating these as the institutions established for the express purpose. He explains this by saying that in the general hospitals there has not been the same concentrated interest shown by the management as at special hospitals, where no expense is spared, and the most difficult cases are likely to be seen. On the question of cost, he said, the kind of disease must be taken into account. In cancer cases, for instance, a very nutritious and costly diet is necessary; in throat diseases, very concentrated food, beef tea and such-like articles are necessary. In ophthalmic cases, on the other hand, a simple and low diet is generally required. He defended the system of charging patients according to their means. Subscribers generally approve of it. At the Throat Hospital (established 1863) for the first two years the treatment was entirely gratuitous; but subsequently a method was introduced of ascertaining what the patient could afford. A card is now given to every patient explaining the system, and graduated rates of payment are fairly obtained. That hospitals are founded by doctors is, Sir Morell Mackenzie thinks, a necessity of the times. The pious founder does not now leave money to found a hospital. Doctors have founded most

of the modern general hospitals, as well as the special ones. Charing Cross, St. Mary's, the West London, and the Great Northern were all founded by doctors. Special departments are established at the general hospitals, but the medical staff at these do not care to have some one specially distinguished or conspicuous working by their side, and it often happens therefore that the most competent men cannot get connected with the principal hospitals. On the whole, admitting some abuses. Sir Morell Mackenzia does not think London is at all overcrowded with special hospitals, and believes that much good is effected by them. He considers that a stupid man who is a specialist is likely to be more successful in his department than a clever man treating all diseases. On this Lord Cadogan asked him if, in the interests of both medical men and patients, he would desire that medical men should limit themselves to the treatment of one particular disease. "I think," said the witness, "they ought to study all diseases for some years, and then limit their attention to some particular disease." "Do you not think," asked Lord Thring, "that a man devoting his whole life to a special subject has a tendency to narrow his intellect?" "I do," was the answer, and, in reply to further questions of the same character, Sir Morell said such devotion to one subject would have a serious effect on a man's mind if he did not strive to counteract it by general investigation. On this consideration he concluded that "if you study several subjects you get a wider knowledge, but that you get a more intense knowledge if yon study one." Valuable evidence in favour of special hospitals was also contributed by Mr. Lennox Browne, of the Central Ear and Throat Hospital, and on the whole the investigation so far shows that, while there exists a good deal of jealonsy among general practitioners against special hospitals, the representatives of these can make out a strong case for their support in most instances.

BROKERS AND THEIR LIABILITIES.

THE recent financial disturbances in Mincing Lane, which culminated in the stoppage of a couple of firms attached to the produce-broking business, have had the effect of drawing attention to certain moot points connected with the rights and liabilities of brokers. One important question is whether, and within what limits, a broker is financially responsible to the principal for whom he sells. That question has, we believe, been discussed on many occasions in arbitration cases, but we do not know that it has ever before been laid before any legal tribunal in such a manner as to provoke a definite judicial pronouncement, and at the present time the gleaner of opinions in Mincing Lane circles is pretty sure not to receive identical answers from any two individuals from whom he seeks enlightment.

In the case of Domeier v. Hale, which was tried in the Court of Queen's Bench in December, 1883 (and is reported in The Chemist and Druggist, January 15, 1884), a large number of representative Mincing Lane men gave evidence with regard to the "custom" alleged to prevail in the market on the subject of the personal liability of a broker to his principal for the payment of goods sold through the broker's intermediary. In that case the plaintiff, who was a drug merchant, employed the defendant as a broker to sell a parcel of chamomiles, expected to arrive from the Continent in about ten days. The defendants accepted the retainer, and sold a portion of the drug in Mincing Lane the same day on the usual terms—viz., "prompt fourteen days, less 2½ per cent. discount." On that day also they forwarded a "sold note" for the goods. The parcel arrived as expected,

and that fact was duly notified to the broker. Certain difficulties arose with regard to the weight and number of the packages. These complicated the questions submitted to the court, but they could have been easily adjusted. The real question at issue was whether, seeing that the defendants did not disclose the name of the firm to whom they had sold the goods until a fortnight after the arrival of the parcel, they had, in consequence, assumed liability themselves. The plaintiff claimed payment for the goods from the defendant, and the principal allegation on which this claim was based (there were others) was that the defendant (the broker) had become himself responsible, as he had failed to disclose the buyer's name within three days of the contract. The jury, after a two days' trial, returned a verdict in favour of the plaintiff; but a few days later, when defendant's counsel applied for stay of execution pending appeal, it accidentally transpired that some of the jury had found for the plaintiff on one ground and some on another. This, the judge said, was not a proper verdict, and consequently the whole trial was coolly declared void. "Wretches must hang that jurymen may dine" runs the well-known verse, which in this case received a mild illustration by the fact that Mincing Lane had to pay for a fiasco caused by the circumstance that the judge was not in court when the jury brought in their verdict. Had it not been for this unfortunate circumstance the question of hrokers' liability in this respect might perhaps have been finally settled on that occasion. As it is, the matter to-day remains as confused as ever, the only materials of any value in the elucidation of the problem being the sworn evidence of some dozen or score of Mincing Lane brokers and merchants given at the trial referred to. The plaintiff's counsel brought forward ten witnesses, who all swore to the existence of a custom in the drug trade under which a broker who failed to disclose his principal was held liable as if he himself were the buyer. There was a general agreement that the custom applied to spot as well as to delivery contracts, but the witnesses were at variance on the important detail whether the broker's liability commenced from the moment he had signed the contract note, or whether he had three days in which to declare his principal.

Trade customs are not very easy to prove in a court of law; judges are always-and rightly-somewhat suspicious of them. Lord Justice Bowen once pointed out that the object of mercantile nsages was to guard against loss and insolvency, while the object of legal provisions, he implied, was to prevent frand. "Credit," he said, "not distrust, is the basis of commercial dealings; and mercantile genius consists principally in knowing whom to trust." The legal requirements of a "trade custom" are that it must be established by satisfactory evidence that such custom is well known to all in the trade, or, if not known, that it might have been known on inquiry; further, that it must be reasonable (i.e., not inconsistent with law); and, thirdly, that it must be so fixed and certain as to be generally acquiesced in. These conditions in the case quoted were not complied with; moreover, the defence hrought forward several witnesses, both brokers and merchants, who swore that they knew nothing of the alleged custom, though they, again, were not agreed as to where their liabilities commenced or terminated, but it was suggested that it was usual for the seller, where the hroker undertook liability, to pay $1\frac{1}{2}$ instead of the usual 1-per-cent. brokerage. At the same time, it was admitted on all hands that brokers are not in the habit of disclosing their principals, simply hecause they do not want to reveal their respective clients to third parties. This brings us to a question which has been asked before, but to which, to our knowledge, no satisfactory answer has ever

been given :- "What is the use of brokers?" That there is a raison d'être for the middleman who, in return for a commission, holds an absolutely even balance between buyers and sellers who may not desire to have direct business relations, no one can dispute; but what if that middleman has the right, at any time pending the conclusion of a transaction to tarn round upon A and say, "Oh, but I am not responsible at all; you must settle direct with my buyer, B?" Why, in such a case, should not A go direct to B? Or why should not A be told of B's identity at the time of the contract, so that he may know with whom he is dealing? And in the absence of any penalty enforceable against the broker who is found to have speculated on his own account, while leading others to believe that he acted as an impartial middleman, who is to know where the broker ends and the merchant begins? At present many Mincing Lane brokers are amphibious beings, who, like the bat in Lafontainc's fable, change from monse into hird, and vice versa, at their own convenience. "Je suis oisean, voyez mes ailes; je suis souris, vivent les rats!" may be a highly-convenient motto for trader or politician, but it is distinctly desirable in the interest of the community that those who hover between the two species should be compelled to take a definite choice, and made amenable to certain plain and straightforward rules of business.

PHARMACEUTICAL LEGISLATION IN FRANCE.

OUR Paris correspondent has been reading the historical sketch of British pharmaceutical legislation which is published in The Chemists' and Druggists' Diary, and it has suggested to him to set down in chronological order the efforts made by our neighbours during the past half-century to reform their own legal provisions. It is undonbted that pharmacy is held in much higher respect in France than it is here; but notwithstanding the respect, and in spite of the fact that the Legislative Chamber is seldom without two or three pharmacists among its members, the story of delays and disappointments which this record tells, is at least as discouraging as that which characterises our own history.

The law governing pharmacy in France is mainly the famous "law of Germinal Year XI.," and the multitudinous and often conflicting interpretations of that statute which have been given subsequently. For a long time the legal position has heen recognised to be so obscure and unsatisfactory that many attempts have heen made to define the position of pharmacy and pharmacists. Several Royal and Imperial ordinances, and many Ministerial decrees and declarations, intended to explain and straighten matters, were issued at various periods, hut these only succeeded in making confusion worse confounded. It became evident that nothing short of new legislation would answer the In consequence, in 1825 a Bill was introduced by the Government, and favourably acted upon by the Chamber of Deputies, but an amendment by the chemist Chaptal having been adopted by the House of Peers, and rejected by the Chamber, the Bill was withdrawn. Next, in 1847, Minister De Salvandy introduced another Pharmacy Bill, which passed the House of Peers without difficulty. But before the Chamber of Deputies could take action, the revolution of Fehruary, 1848, broke out, and stopped everything for awhile. Pharmaceutical legislation, loaded in the meantime with an assortment of new dccrees, slumhered until 1872, when MM. Naquet, Bourgeois, Chevandicr, De Salvandy (the son), and others, obtained the appointment of a Commission of 15 to prepare a Pharmacy Bill. After the

Commission had held one meeting the political turmoil of 1873 caused the project to be abandoned. Then, in June 1884, a well-digested Bill, on which Senator Naquet presented a most complete and favourable report, cane ver near becoming a law when, the powers of the Legislature having expired with the end of the year, the Bill dicd also. In November, 1885, another Pharmacy Bill was introduced, taken into consideration, and, together with a similar project of governmental origin, referred to a Committee. A report was presented in July, 1888, but the Bill lapsed again through lack of action by the expiring Legislature. And lastly, in 1889, ex Minister Lockroy introduced before the present Parliament another Pharmacy Bill, which, together with cognate measures, is now in the hands of a Commission. The readers of THE CHEMIST AND DRUGGIST have been informed of the main features of the Bill and its varying fortunes as it progressed; also of the reasons why it is likely to fail again unless some high pretensions be toned down a little.

SEIDLITZ POWDERS.

IT seems late in the day to be introducing a formula for seidlitz powders into the British Pharmacopæia; yet that is an event which we have to record this week. Perhaps there are few more popular medicines in this country, and if we may judge from the fact that the Pharmacopæia of the United States has contained a formula for at least twenty years, it is equally popular there. But, however popular seidlitz powders may be, we question if many people could tell how the compound and its name originated. We confess that we are not confident about it, and apparently the late Professor Christison did not know, for in his article on "Potassæ et Sodæ Tartras," he says: "A drachm [of the tartrate] added to one of the papers for effervescing powders increases their purgative power, and constitutes what are improperly called seidlitz (Seignette's?) powders in many shops." Elsewhere he is not so dubious about Seignette's association with the powders, for he says, "Carbonate of soda has been used for making effervescing powders and seidlitz (Seignette's) powders." There is some resemblance between the sounds of "seidlitz" and "Seignette," and both take us back to the end of the seventeenth century, when Seignette, the Rochclle apothecary, discovered in 1672 how to make the salt long associated with his name. but now better known as Rochelle salt. Everybody now knows that the blue-paper mixture of bicarbonate of sodium and Rochelle salt, which the Pharmacopoeia has just officialiscd, is called seidlitz salt; but it is a perversion of a name given as far back as 1694 to sulphate of magnesia, which was furnished abundantly by the Seidlitz spring of Bohemia, and that name, as well as Epsom salts, was retained for the sulphate quite commonly up to fifty years ago. For instance, in the 1827 edition of "Urc's Dictionary," we find "Salt of sedlitz-sulphate of magnesia"; and Christison gives it in 1842. We presume that the Seidlitz spring is of little account nowadays, for we find no analysis of its water which is not a manipulation of that made by Bergmann 120 years ago. Then 60,000 grains of the water, or, to be exact, 59,8583, yielded the following constituents:-

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Carbonate of lime
                                       6.7 grains
                                 • •
Carbonate of magnesia
                                      21.0
                           . .
                                 . .
                                             33
Sniphate of lime
                                      41.1
                    . .
                           . .
                                 • •
                                 .. 1444.0
Sulphate of magnesia..
                                             33
Chloride of magnesium
                                       36.2
Free carbonie acid ...
                                        8 eubie inches
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An analysis by Nauman is quoted in Watts' dictionary, which gives Ca 722.9, Mg 2,918.5, CO₃ 904, SO₁ 11,568.6, and

Cl. 292 in 1,000,000. This water was used for making Epsom salts, and it is apparent that those who persist in making seidlitz powders therewith have something else than economy to warrant their exceptional behaviour.

This, however, does not trace the origin of the present form of seidlitz powders. Mr. Richard Reynolds tells us that in 1827 they were 4s. 6d. per box; but what were they? and how many were in a box? We notice that Mr. Martindale, in a paper read before the Pharmaceutical Conference six years ago, did not get further back than Christison; and we may assume that if the powders were common in the shops then that the powders referred to by Mr. Reynolds would contain Rochelle salt, and not Scidlitz salt. In all likelihood we have here the first glimmerings of elegant pharmacy; the original Seidlitz salt is by no means a pleasant thing, while to some tastes seidlitz powder is the incorporation of all that is refreshing.

We presume that the attention now given by the Pharmacopœia authorities to seidlitz powders is due, in some measure, to the interest manifested therein by the trade. Various investigators, from a Hawick apprentice to a member of the Pharmacopæia Committee itself, have reported on the quality of trade powders, and it appears from what they have stated that there is a woful lack of uniformity in the powders. This is due entirely to the use of the boxwood egg-cup measure which is universally employed for apportioning the salts and acid, and one good influence which the official formula will produce will be the necessity of weighing the salts and acid. We say "necessity" with some reservation, for it will be observed that "seidlitz powder" is not given as a synonym of the official preparation, and it has yet to be determined how far a mere foot-note in the Pharmacopeia is legally binding upon pharmacists, although there can be no doubt about its moral effect. The proportions adopted by the Pharmacoposia are the usual standard for the bluepaper contents, but the quantity of acid differs from what is given in the French Codex and the United States Pharma-About 36 grains of acid neutralise 40 grains of bicarbonate of soda, but slight acidity is preferable, and we think that it is wise to prescribe 38 grains instead of 40 grains as was first intended. With an excess of acid there is a tendency to the formation of cream of tartar, which is precipitated, giving the draught a very objectionable appearance, similar to what results when the acid is dissolved in the water first. Like many other small difficulties in pharmacy this one was long observed before anyone applied himself to find the reason for it, and it was left to Mr. William Gilmour and Mr. William Martindale to explain the matter. It may be hoped that with an official formula we shall have no more trouble with seidlitz powders, and that the official formula will be universally accepted.

COMMENTARY.

THE IMPURITIES OF SALICYLIC ACID.—In a critical note on Professors Dunstan's and Charteris's papers on salicylic acid, Dr. Ralph Stockman gives it as his opinion (British Medical Journal, November 29) that the impurity is not cresotic acid at all, but something which has not yet been identified, but which was "no doubt present in the samples of para and ortho cresotic acids sent to Professor Charteris." Dr. Stockman's reasons for this conclusion are (1) the therapeutical data supplied by foreign investigators, as summarised by Mr. Helbing, and (2) the fact that the cresotic acids are salicylic acid in which one H atom is replaced by a methyl group, so that it is so closely allied to

salicylic acid that "one would predicate with certainty that in action it would closely resemble salicylic acid." As to introducing the purified acid into the Pharmacopæia, Dr. Stockman says: -" It has still to be proved that the tests proposed will ensure the exclusion of the non-identified body which is really the offending substance. Before finally altering the official tests, the matter should be much more thoroughly sifted." It will be noticed that the matter also came before the General Medical Council last week, and it was then stated that "as soon as the present conflict of opinions, both as to the most practicable mode of purifying impure commercial salicylic acid, whether by chalk, lead or otherwise, and as to the pharmacological action of the alleged toxic paracresotic compounds, stated by several other pharmacologists to be as useful as, and less harmful than, salicylates, had been adjusted, or before then if desirable, the Pharmacopæia Committee might be trusted to take any necessary steps to prevent other than reliable salicylic compounds being recognised in the Pharmacopæia."

A DEFENCE OF PATENT MEDICINES.—A sensational and not very well-informed article, entitled "Homicide as a Misadventure," was published in the National Review for October last, the author being Dr. H. W. Hubbard. The impression conveyed by the article was that deadly poisons are being sold in vast quantities as patent medicines, under fanciful and alluring designations, with labels in no way indicating the nature or potency of the ingredients, that deaths are constantly occurring in consquence, and that the word homicide would more correctly describe these events than misadventure. There is a letter in the same review for December in reply to Dr. Hubbard's article, by Mr. John Morgan Richards, of 46 Holborn Viaduct, who has at any rate the advantage of an intimate acquaintance with the subject. Mr. Richards first shows that the general definitions which Dr. Hubbard adopts are neither comprehensive enough nor exclusive enough. The medicine stamp has to be applied to many proprietary medicines which are in no sense secret, while the most objectionable nostrums often escape duty if they are skilfnlly labelled and advertised. "Hair-washes, complexion-lotions, and cosmetics, though nearly always containing active poisons, and finding a place on every toilet-table, are exempt, as are also the veterinary medicines so often accidentally taken by grooms and others, with fatal results." Moreover, it is not the case that deadly poisons are exclusively administered without label or instructions, and in deliberate contemplation of wholesale homicide. "On the contrary, directions of the fullest kind are invariably printed on the labels of all proprietary preparations. Mannfacturers are, for their own sake, most punctilious on this point. They know full well that if by any error, stupidity, or carelessness on the part of patient or nurse an accident should occur, their wares will be held up to execration in every possible shape, and they themselves will presently be made to fignre in a sort of combined rôle as something between Lucrezia Borgia and the Whitechapel murderer-only more so!" Mr. Richards goes on to ask where is the difference in this respect between a patent medicine and a doctor's prescription. "In the case of the former, the law insists upon a distinctive label if any danger is deemed to exist, and very full directions are always appended in print; whereas, in the latter case, the instructions are sketched out in a highly abbreviated Latin, and translated, but in writing only, by a druggist's assistant. Should a patient die from the effects of the patent medicine, taken according to directions, the maker would be liable to, and would deserve, exemplary chastisement; so would a medical man in the same circumstances. But Dr. Hubbard does not ever pretend to be cognisant of any such occurrence in which a patent medicine was concerned! How is a prescribed medicine, on the other hand, more secure against accident or abuse than a proprietary one? And if the clear instructions are disregarded, in one case or in the other, how can either the prescriber or the manufacturer be blamed?" It is further pointed out that out of several thousands of patent medicines the really poisonous are very few, and it is asserted that statements as to the frequency of accidents are greatly exaggerated. Mr. Richards believes such accidents are at least as infrequent as those occurring from errors in dispensing prescriptions by chemists' or doctors assistants. The fact that the former are compounded in great bulk eliminates the chances of such mistakes.

STANLEY'S REAR-GUARD .- Lieutenant Tronp returns to the charge against Stanley in an article contributed to the Fortnightly Review of this month, and in the course of this article he again mentions the deficiency of the medical stores. The men suffered, he says, from sores and ulcers, and "nothing was provided to alleviate their sufferings. . . . The stores of medicine, such as they were, were entirely inadequate to supply the requirements of the white men. . . . We had only a few drops of carbolic acid, and we had a small quantity of quinine, but I never saw among the stores any other medicine such as we required. Mr. Bonny, too, testifies in his medical certificate to the absence of tonic medicines, &c, while with this expedition, and I myself suffered from the entire lack of counter-irritants." After writing this, Lieutenant Troup saw Messrs. Burroughs, Wellcome & Co.'s denial, and he replies that they must be as illinformed as he is as to the medicines which Stanley left at Yambuya. He supposes that the case returned to them "was in all probability one of the treasures from Stanley's private stores" of clothes, &c., which were not opened until June 4, 1888. Lientenant Troup received a small medicinecase when he arrived at Yambuya. "This had been ruined by soaking in water, the tabloids, or whatever the bottles contained, were nearly all dissolved, and the labels had all been detached."

THE SPURIOUS "BEECHAM" BUSINESS .- We report Chancery suits against four chemists and one medical herbalist, all at Portsea, for selling spurions Beecham's pills. Fonr of the defendants acknowledge their fault and submit to injunctions. To encourage others, it may be mentioned that costs invariably follow the decision in these cases, and it is always open to Mr. Beecham also to claim damages. We have reported about twenty such cases brought into court this year, and it would be absurd to suppose that every delinquent has been discovered. The necessity for these injunctions is most discreditable to the trade. The fact that profits on patent medicines have been largely reduced in recent years does not justify any retailer in cheating the patent-medicine maker. Of course no one will argue that it does, but an illogical sort of half-expressed feeling that way has been occasionally evidenced which makes these few words of caution and regret not nncalled for. There can be no sympathy with chemists who get smartly punished for practices such as Mr. Beecham has exposed.

How it Strikes an Outsider.—After the chemists of Hull had so manimously expressed their approval of the Pharmacy Acts Amendment Bill, "Free Trade" wrote as follows to the Eastern Morning News:—

Sin,—Under the specious pretext of protecting the public how many trades and classes use this method of protecting themselves!

We have had the pope of pharmacy in the town, blessing the faithful, and strengthening the weak and wavering chemists and druggists who have not been paying their Peter's pence, in the shape of subscriptions to the Society. However, the erring ones are to receive absolution, and, as a

sop for their support in assisting to got a Pharmacy Aets Amendment Bill passed, are to be received into the fold as members instead of heiog only termed "Associates in Business."

What is this "Amendment Bill"? Nothing more or less than protection of a very aggressive character. One of its clauses provides that no "unqualified" assistant shall dispense medical proscriptions. Now, as the Pharmaey Acts were passed in 1868, and concldering that there is no provision for those assistants who have entered the business since that time and have not qualified, a great piece of injustice is intended.

More than this, it will also very seriously affect a large number of chemists who are muable to afford to keep a qualified assistant, and will mean that they themselves will have to be constantly on the precises.

In the case of unqualified assistants to medical mee, it simply means that their living is to be taken away from them, through no fault of their own. To be just, why is there not in clause 7 a provision for allowing those unqualified assistants who have been in the trade, say ten or fifteen years, the opportunity of registering as "assistants" or "dispousing assistants," and by so doing give them a chance to earn a living at the trade to which they have devoted so much of their time? The reply to this will be—"They should have qualified before this." Yes, and so they might many of them have done had they not been kept grinding away from eight o'clock in the morning until eight or nine o'clock at night. I have known plenty such; and to study in the way required by the examiners of the Pharmaceutical Society was almost entirely out of the question.

The greatest sinners of all, the limited trading companies or stores, are too powerful to be attacked with any chance of passing the Bill, so they are simply to be left alone. Because many members of Partiament are shareholders in these concerns it would not be wise to touch them; and so they must be left to trade as chemists and druggists as before.

METHYLENE FLUORIDE ($\mathrm{CH_2F_2}$) has been studied therapeutically by M. Chabrié, with the result that he finds it to be possessed of powerful hactericidal properties. The microorganism used was one which is found in the urine, but Chahrié is now experimenting with the bacillus tubereulosis, he having found that the gaseous methylene fluoride does not possess any local irritant action. Methylene fluoride is easily prepared by heating silver fluoride with methylene chloride in a scaled tuhe. M. Chahrié has also sncceeded in preparing the higher homologue, $\mathrm{C_2H_4F_2}$, ethylene fluoride, by the analogous reaction with ethylene chloride, and is extending his observations to the antiseptic properties of this gas.

BRONZE.—M. Berthelot, the celebrated French chemist, is an enthusiast regarding bronze, upon which he has communicated several papers to the Academy of Sciences. In the last one he took up the name of the alloy, and in the course of the paper quoted the following from a work of the time of Charlemagne: "Compositio brandisii: eramen partes II., plumbi parte I., stagni parte I."—that is to say, bronze is composed of two parts of copper, one of lead, and one of tin. This appears to confirm the view that the name of bronze is derived from that of the town of Brundusium, or Brentesion, especially as many bronze vessels have been found marked ars Brundusium.

FACTS ABOUT IODINE.—We have on several occasions referred to investigations which have recently heen made, and which show that the iodine in brown solutions exists in a different molecular form from that in the violet solutions. A practical point is now deduced from this hy Gautier and Charpy, who have been studying the affinities of iodine in solution. They have noticed that where pure mercury is shaken with any solution of iodine green mercurous iodide is formed, but if another metal is present as an impurity the mercury is not acted upon at all, if alcoholic or similar solution is used, until the impurity is converted into iodide; hnt with chloroform mcrcurous iodide s always formed at first. It would be of considerable nterest if these experiments were extended to the pharmaceutical side, using chloroform instead of alcohol for damping the mercury and iodine in making mercurous iodide, and noting the results.

ADVERTISING INFANTS' FOOD IN AUSTRIA.—The Vienna representative of the manufacturer of a well-known food for infants is a pushing and energetic gentleman, to whom it occurred that the increase in the population of the Austrian capital might he turned to useful account in advertising his firm. Accordingly he sought out an official connected in some way with the administrative business of the city, who agreed to supply him with a list of the addresses of all houses in Vienna from which births were registered, at the modest remuneration of 40s per 1,000 names. Within a short time the first list was handed in, the official received his salary, and the representative dispatched to every address given a neat sample-packet of the food, together with a circular congratulating the happy parents, and calling attention to a selection of suitable literature on the dieting of bahies, which accompanied the sample. He then sat himself down with the feeling of a man who has done his duty hy his employers and awaited events. These speedily came, and for effect were comparable only to the results which the readers of Max Adeler's stories will recollect as having followed the publication of the poetical obitnary notices in the Arizona Kieher during the temporary absence of the chief editor of that famous sheet. Written complaints, verhal abuse, threats of prosecution, and menaces of personal violence poured in upon the agent from dozens upon dozens of recipients of the sample packets, who proved to be either childless couples, bachelors, or widows and spinsters, of all ages and stations in life. The desperate agent looked up his official and sued him for damages and the restitution of the salary paid. At the hearing of the case it transpired that the official's efforts to procnrc a copy of the official register of births had heen unsuccessful, and that, in order not to lose the contract, he had engaged a number of people to make a house-to-honse canvass in certain districts and enquire as to births. The answers to these inquiries were strangely different. At most houses the inquirers were expelled forcibly rather than politely, at others the questions were answered with surprising affahility, and in some tenements people actually came forward volunteering to assist in the compilation of the return. Strange to say, nearly all complaints came from the two last categories of houses. The case ended in a compromise, the plaintiff withdrawing his claim upon the payment of 30s. compensation by the defendant.

THE MAGISTRATE AND THE EXPERIMENT .- Scientific men make a good many mistakes, hut in respect to the inflammability of petrolenm vapour we are disposed to think that their theory is based on sufficient evidence. Marsham, the magistrate at the Woolwich Police court. evidently holds this opinion. A few days since he had before him Mr. James Triptree, a dyer and cleaner, who was summoned by the London County Council for keeping petroleum on his premises without a licence. It was stated that the defendant and his wife had been previously expressly warned, but on October 30 an inspector found in the shop a stone jar containing more than a quart of henzoline, which was used for cleaning gloves. The jar was not corked, hat had a small piece of paper for a stopper, from which vapour could escape. This, said the solicitor, was a perilous state of affairs, because the density of the vapour caused it to flow along the ground, so that it might have ignited at a fire and exploded, as had many times happened, causing fatal and lamentable results. Defendant, in reply, denied that the henzoline was as dangerous as had been represented, and offered to pour a similar lot upon the floor of the court near the stove, and show that it would innocently evaporate. "Not while I am here," said the unenterprising magistrate, who preferred to rely on authority. Defendant was fined 40s.

INSECTS INJURIOUS TO DRUGS.

By JOHN R. JACKSON, Curator of the Museums, Kew.

THE greatest difficulties those having charge of dried vegetable products have to contend with are mildew on the one hand and insect attacks on the other. The cause of the first naturally arises from damp; while that of the second too often proceeds from the specimens being kept over dry and warm. If the specimens are frequently moved there is very little chance either of mildew or insect attack; but in a large collection—in a museum, for instance—this frequent handling is scarcely possible: for it is not to any particular part of a plant, or to any special product, that marked attention has to be given—roots, fruits, seeds, foliage, and stems are equally liable to attack; and this destruction by insects seems all the more remarkable from the fact that the little creatures who do the mischief seem as happy, or even more so, when boring into drugs or poisonous plants as they are when feasting on the sweetest morsel. This fact is confirmed by the examination of any collection of materia medica which has been left alone for any length of time, or even by a glance at a chemist's stock npon which there has been no active demand. The subject of these insect attacks has attracted more or less attention at different times. So long ago as 1874 a paper on the subject was contributed to the "Proceedings of the American Pharmaceutical Association," a tew extracts from which may help as an incentive to a further study of the matter in all its bearings, for it is one that might well be taken up and thoroughly worked out by the labours of an entomologist and botanist combined.

The writer of the paper just referred to considers the most injurious of all insects to be that which is known in America as the "Indian-meal moth" (Tinea zew), "so named," he continues, "because it was first found in Indian-corn meal,

although by no means exclusively partial to it."

The varied character of the appetite possessed by this creature during the larval, or caterpillar, stage of its existence is something wonderful, very few substances seeming to be distasteful to it. It thrives equally well on aconite root and taraxacum—devours both with avidity, large roots being frequently so completely riddled by the numerous channels made through them that one can crush them between the finger and thumb. In the case of aconite it would be interesting to know whether the active and poisonons principle of the root is actually appropriated to the nourishment and sustenance of these worms as well as the starchy matter, or whether they possess the power of eliminating from their food noxious or injurious elements, and thus reject the alkaloid in the process. This point I have not been able to determine. Rhubarb, either in root or powder, is esteemed a dainty morsel by this omnivorous creature, and is eaten as readily as pearl barley or burdock. Ergot is also a favourite article of diet, and I have reared it on curry powder, and have even found it feeding on cayenne pepper. Surely with such an accommodating appetite this insect could scarcely ever die for want of suitable food!

When the material fed on is in large pieces, such as roots, this larva forms cylindrical, or sometimes somewhat tortuous, burrows or excavations through it, which are lined with a silky web, more or less of which protrudes about the orifices, where it is sometimes mixed with rejected fragments of the material and the excrement of the worm. When the substance is in smaller pieces, such as ergot or pearl barley, or in case of a crushed root, the larva fastens together with silken threads a sufficient number of particles or pieces to enable it to provide for itself within a secure

place of retreat.

There are some substances which this insect seems to avoid; the following I have never known to be injured, although freely exposed where the insect was abundant:—Podophyllum, leptandria, menispermum canadense, gentian, gelsemium, hydrangea, geranium maculatum, sanguinaria, senega, and sarsaparilla. The cinchona barks also seem free. Cimicifuga in the unground state has escaped injury, but when crushed or coarsely ground it is soon taken possession of by this foe.

Another insect (Pyralis farinalis), known as the "meal

moth," attacks flax sceds and a variety of farinaceous substances, but it is not so general a feeder as the last-named insect.

The facts here recorded coincide with my own experience regarding the wholesale destruction by small insects, and also with the experience of a correspondent of THE CHEMIST AND DRUGGIST, who recently forwarded a sample of aconite root which had been in stock for some years, and which had been completely riddled by a small insect described as the ordinary small brown beetle, which attacks maw seed and pearl barley. This was undoubtedly the mischievous little Anobium, so destructive to almost every kind of vegeteble product. Though none of the beetles accompanied the actual specimen, the ravages were clearly the work of this insect, for I have seen Indian aconite root, or Bikh (Aconitum ferox), riddled in exactly the same way, with a plentiful supply of the insects present, thus proving the cause of destruction. With the specimens forwarded by this correspondent were some portions of a small moth, but this material was so imperfect as to be unidentifiable by an entomologist to whom it was submitted.

With regard to the omnivorous habits of these little insects, I can fully believe all that is said by the writer in the "Proceedings of the American Pharmaceutical Association," for I have found them revelling in rhubarb root, liquorice root, and in the poppy-leaf coverings of the Indian opium balls, though they seem not to perforate the opium itself. African tobaccoleaf, however, when made up into twisted rolls is not free from them, and as proof of the fallacy of camphor acting as a preventive to their attacks, I have seen them apparently in a thriving condition in a closed case in proximity to a camphor bell as it is sent out from the

refiners

Regarding provention, the American writer says: "By providing proper vessels in which to store the various substances the pharmacist keeps in stock with suitably fitting covers, much damage of this sort may be prevented; but where the insects have already gained foothold I know of no better method of destroying them than one suggested by Dr. Squibb, which is by the vapour of chloroform. A ready way of applying this is to pour a little of the liquid on a small piece of sponge, and place it in a shallow tin box or other suitable vessel, and close the lid of the package containing the infected drug tightly so as to prevent free access of air. The vapour of the chloroform, in consequence of its density, falls on the material, and diffuses itself through the entire mass, carrying death wherever it goes. Where the moths are found to be abundant they may be attracted and poisoned while in the winged state by exposing cloths wet with a mixture of molasses and a strong solution of arsenic, to which a few drops of essence of pear have been added.'

This, it must be remembered, was written so long ago as 1874, and some better remedies have propably been recommended since then, and the use of bisulphide of carbon has become of late very general in the destruction of insect pests in grain-indeed, in a recent number of the Kew Bulletin a memorandum by Professor A. H. Church, F.R.S., is published on the preservation of grain from the attacks of weevil, in which the professor says the only cheap and perfect application for the prevention of the attacks of weevil upon corn and grains consists in the employment of bisulphide of The quantity required, provided the grain is kept carbon in closed vessels, is very minute—not more than 11 lb. to each ton-so that 8d. is the cost of preserving a ton of wheat. The bisulphide leaves no disagreeable taste or smell behind, and the quality of the grain remains unimpaired. The liquid is applied as follows:—A ball of tow is tie to a stick of such a length that it can just be plunged into the middle of the vessel containing the grain. The tow receives the charge of bisulphide like a sponge, and is then at once plunged into the vessel containing the grain and left there, the mouth being tightly closed. When necessary the stick may be withdrawn, and the charge of 1 oz. of bisulphide to 100 lbs. of corn may be renewed. The question of the preservation of food grains from the attacks of insects is one of equal importance with that of the preservation of drugs, and these remarks may serve to ventilate the subject and induce correspondents to give their experience.

HIP SHEDS contain vanillin. Schneegans has recently separated from them the equivalent of 1 in 10,000.

BRITISH AND FOREIGN CONSULS' REPORTS.

CHINA.

In former years star anise oil and seed were Star-anise among the principal articles of export from Oil. Pakhoi, but in 1889 only 331 piculs of the former and 6,069 piculs of the latter were exported. It appears that the trade route via Touquin or Canton has damaged the Pakhoi trade in these articles.

Trade at Cartagena. Nearly all the perfumery and a considerable portion of the drugs and medicines imported into Cartagena (a city which is now in a flourishing condition of rapid growth) come from France. Of medicinal balsam 54.762 lbs. (worth 2,6051.) were exported in 1889, against 16,830 lbs. Medicinal Balsam.

(worth 6411.) in 1888. DUTCH INDIES.

Dutch Indies imported in 1888 Drug 816,474 florins' worth of drugs and medicines. Imports Imports 315,596 florins of perfumed waters, and 4.857,820 florins of opium, 1,253,560 florins of the latter being for Government account.

the exports the follow-Among were Experts. ing :-

Dr gs and Medicines Cloves Benzoin Camphor Mace Nutmegs 103,832 2,169,358 64,872 Florins.. 550,008 796,977 1,921,243 FRANCE.

The manufacture of tartaric acid in Marseilles Tartaric has received a considerable impetus from the Acid. establishment of a new factory. In 1888 the output in that city was about 400 tons; in 1889 it reached 800 tons.

JAPAN.

The Japanese are now trying to manufacture Fine iodide of potassium themselves. Among new Chemicals. remedies sulphonal and chloralamide have been introduced as hypnotics in 1889. Of the former small quantities have been sold; the latter has not yet been able to gain a footing. Among antipyrctics, antipyrin aud anti-febrin have maintained their position; phenacetin aud exalgine have also been tried, but have not as yet found any sale whatever. In santonin very little business was done during 1889, as the Japanese, owing to the high quotations for that preparation, use the raw wormseed, which can be bought at \$7 per picul. Of amorphous phosphorus, French and Russian makes have been introduced in competition with the English, but thus far without the same success as the first named. The excessively stringent inspection of all imported chemicals in the Government laboratories still continues, and from all those not strictly in conformity with the Japanese Pharmacopæia the official stamp, without which they may not be sold in Japan, is withheld.

The following were among the quantities imported into Yokohama in 1889 (the figures representing catties of $\frac{1}{3}$ lb):—Pot. bromide, 32,170; pot. iodide, 21,206; glycerine, 58,821; gum arabic, 116,444; carbolic acid, 25,900; caustic soda, 1,289,903; cinchona, 34,524; phosphorus, 11.626: salicylic acid, 15,224; santonin, 5,029; tartaric acid, 15,199. In addition to these the imports of quinine were 47,332 oz, and of morphia, 6,736 oz. Of unenumerated raw drugs, 83,514 yen; of medicines and fine chemicals (unenumerated), 402,587 yen; and of dyestuffs, 745,802 yen value were also

imported.

MEXICO.

Drugs and The following figures represent the imports of drugs and chemical products into Mexico during the first half of the fiscal year, 1888-89, from the four principal markets of supply:-

Imported from	United States	United Kingdom	Frauco	Germany		
Drugs, value. \$ Duties payable on these, \$ Or per cent	476,756	40,949	117.652	50,301		
	313,198	24,403	56.478	29,208		
	65±	59 <u>1</u>	47 <u>1</u>	58½		

PERSIA.

In the province of Azarbeijan, the northernmost Boxwood. part of the country near the Caspian, where the rainfall is very heavy and forests abound, boxwood of good quality is plentiful, but that near the sea has in great part been cut down and exported to England $vi\hat{a}$ Russia. Considerable quantities of boxwood are still to be found, but chiefly in inaccessible situations, and, as there are no roads in the country, it has become difficult to transport it to the sea.

Galls and Nutgalls and gum tragacanth are also produced in this province in large quantities, but they are taken south by caravans, $vi\hat{a}$ Sehna, to Baghdad, whence they are brought into commerce.

Quicksilver is found on the road from Tabreez Mercury.

to Teheran.

Among the principal exports of Persia is opium, Opium. the poppy being cultivated all over Persia. The best kind comes from the Ispahan district, where the product at present amounts to about 230 tons per annum. poppies are mown in the beginning of June, and the sap brought to market iu copper casks. As a rule the opinm goes through various hands before it is purchased by the exporter. The very best is grown in the neighbourhood of the village of Kupe, close to Ispahan; le-s valuable kinds come from Yezd, Teheran, Koom, Shiraz, and the provinces of Burudshird and Kermanshah. The opinm of the north of Persia contains less morphine than that of Ispahan and Yezd (from 13 per cent. to 16 per cent. morphine). Opium is exported mingled with oil to China, or pure to England for the manufacture of morphia.

RUSSIA.

Business in Petersburg and Cronstadt to those of the St. Petersburg whole of the Russian Empire, which was 13 per cent. in 1883, has gradually grown to 191 per cent. in 1889; on the other hand, the exports from those two ports, which in 1883 were 17.7 per cent. of the total exports from

Russia, fell to 10.3 per cent. in 1889.

Customs Stringent, and in many cases vexatious, cus-Regulations toms regulations continue to be strictly enforced. The attention of shippers cannot too urgently be called to the necessity of conforming to the Russian customs regulations in every particular, to avoid "accidence" fines and penalties connected with incorrect description of weight and quantity of goods in bills of lading. A translation of the Russian regulations has been published by the Board of Trade, and all firms interested in the trade with this country are recommended to provide themselves with a copy. During the last navigation season ten British vessels were obliged to pay fines varying from 101. to 201., for contravention alone of the rule which makes the production by shipmasters of bills of lading imperative on the arrival in a Russian port.

Drugs at Nijni-Nov. The great fair of Nijni-Novgorod, in 1889, was, on the whole, a successful one. Among other goods a good business is reported to have been gorod. done in drugs, indigo, and olive oil. Of drugs, dye-stuffs, and paints, 5,565,750 roubles' worth were brought. to the fair, against 5,479,850 roubles in 1888.

SPANISH COLONIES.

A few seasons ago the pressing of cocoanut-Cuba Cuba Cucoanut oil oil was taken up in Cuba, but, as it appears, cucoanut oil unsuccessfully, for one of the two factories working at Baracoa last year has been closed.

TURKEY IN ASIA.

Owing to the low prices of cereals in the Opium. interior (says the German consul at Amassia) the cultivation of the poppy is extending from year to year. In 1889 69,350 kilos, were exported. The best qualities are produced in the neighbourhood of Malatia; next follow Sileh, Tokat, and Amassia. The morphia proportion of these varieties ranges from 8 to 12 per cent. The opium is not shipped direct to the consuming countries, but mostly viâ Constantinople, and thence to England or Germany. A considerable quantity is also sent to the Dutch Indies. The poppy seed obtained from the plants is all shipped to the Marseilles oil-factories.

Trade Report.

Kolice to Retail Buyers:-It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

Is should also be recollected that for many articles the range of quality is

very wide.

42 CANNON STREET, E.O., December 4.

THE CHEMICAL UNION.—It is reported that the first chemical works in the North of England affected by the Alkali Union are about to be dismantled, orders having been given to dispose of all the plant of the Tyneside Chemical Works, Felling on-Tyne. The plant has not been in operation for some years past, and belongs to one of the five firms with whom the United Alkali Company (Limited) made arrangements to have the control of the works so far as the Leblanc departments were concerned.

THE CINCHONA AUCTIONS.—At Tuesday's sales Mr. Howard proposed and Mr. Tabor seconded a motion to the effect that the next bark sales, to be held on December 16, should be the last of the present year, and that the first bark sales in 1891 should take place on January 13. This was unanimously agreed to.

ACID (CITRIC).—The market is firm, but without much business passing. There are buyers at 1s. $3\frac{3}{4}d$. per 1b. but no sellers below 1s. 4d. per 1b. For concentrated lemon-juice 217. f.o.b. is now quoted from Sicily, and on the basis of the old system that acid should be worth as many pence as the juice is pounds, the manufactured article ought thus to be worth from 1s 8d to 1s. 9d. per lb.

ACID (TARTARIC).—Quiet and dull; English at 1s. $2\frac{3}{4}d$. to 1s. 3d., Foreign at 1s. $2\frac{1}{4}d$. to 1s. $2\frac{1}{2}d$. per lb.

ALOES.—At last Thursday's drug sales there was a rather large supply of East Indian aloes, most of which sold at low prices. Thirty-seven cases Zanzibar, in skins, realised 78s. to 80s. for fair softish, mostly pale; and from 70s. down to 31s. per cwt. for fairly good to very common dark and hard. There has been another arrival of 71 cases Cape aloes per Trojan from Mossel Bay this week.

ANNATTO.—There have been larger arrivals of seed from Ceylon this week, two vessels bringing 276 packages.

ARSENIC.—Held for 14s. 6d. to 14s. 9d. per cwt. for best white powder landed.

BALSAM (COPAIBA).—The market is moderately active, and the last Liverpool quotations are 2s. $2\frac{3}{4}d$. to 2s. 3d. per lb. for good bright Maranham. At that figure business has been done. Ordinary grades are quoted at 2s. 1d.

BENZOL.—Still advancing: 90 per-cent. on the spot, is held for 4s. 8d. to 4s. 9d, and for 1891 delivery at 4s. 6d.; 50-percent., 3s 6d spot, and 3s. $4\frac{1}{2}d$ for next year. This affects all derivates, such as mirbane oil, acetanilide, benzoic acid, ex toluol, &c.

BLEACHING POWDER is held at 71. 10s. from the warehouse, but second hand holders are offering at about 5s. below the Union prices.

BORAX.—Refined borax is in strong demand at 27s. to 30s. per cwt., according to brand.

BUCHU.—The Dunbar Castle has brought 10 bales from Cape Town this week.

CAMPHOR (CRUDE).—A dull market. Last week a parcel of 100 cwt. Japan on the spot changed hands at the price of 157s. 6d per cwt. Holders would then have accepted 155s., and were offering thereat, but to day there is a firmer feeling and another 100 cwt. are reported sold at 157s. 6d. per cwt. For shipment, 150s., c.i.f., would be obtainable, but nothing is offering so low as that.

CAMPHOR (REFINED).—The English refiners have made no change in their quotations, but Foreign second-hand holders are prepared to take rather less. They would accept 1s. 9d. per lb., or even 1s. $8\frac{1}{2}d$. per lb. for a quantity.

CINOHONA.—The bark supply offered at Tuesday's auctions was a very moderate one, consisting of:-

		P.	ackages	P	Packages		
Ceylon bark			1,064	of which	971	were sold	
East Indian bark			684	22	623	27	
Java bark			75	,,	75	"	
South American bark	τ		234	"	171	>>	
West Coast African			221	"	156	11	
					-		
Total	••		2,278	,,,	1,996	27	

The assortment was not remarkable in any way, except for the unusually large consignment of bark from the African West Coast included in it. There was a small quantity of good Ledgeriana bank from the Wentworth plantations in India, and also a few lots of fine renewed Succirubra, but most of the bark was of ordinary or medinm quality. Competition was brisk, and the improved tone of the market enabled holders to realise a slight advance on the previous auctions, the unit for good barks being $1\frac{5}{8}d$. per lb., and the average fully $1\frac{1}{2}d$. per lb. The following prices were paid for sound bark:-

CEYLON CINCHONA.—Original.—Red varieties: Poor and dull to fair bright quilly stem and branch chips, $1\frac{3}{4}d$. to 3d. a few lots $3\frac{1}{2}d$; ordinary weak and woody shavings, $1\frac{3}{4}d$ to a rew lots $0 \pm a$, ordinary weak and woody shavings, $1 \pm d$. to $2 \pm d$,; good bright ditto, 3d, to 4d, per lb. A considerable quantity of low dusty and damaged to fair root, $1 \pm d$. to 4d, per lb. Grey varieties: dust, 2d.; small shavings, $3 \pm d$.; ordinary small woody to fair quilly chips, $2 \pm d$. to $4 \pm d$.; fair root, 4d. to $5 \pm d$. per lb. Yellow varieties: very poor siftings, 1d.; ditto chips and shavings, $1\frac{1}{2}d$.; fair chips, 4d.; and common root, 2d. per lb. Hybrid: stem chips, 3d.; ditto shavings, 4d. per lb. Renewed.—Red varieties: ordinary woody and dusty chips, $2\frac{1}{2}d$ to $3\frac{1}{2}d$.; fair to good bright strong ditto, 4d. to $6\frac{1}{2}d$.; good bright chips and shavings mixed, 6d.; common shavings, 3d.; strong bright spoke-shavings, 5d. to $6\frac{1}{2}d$. per 1b. Grey varieties: fair to good strong quilly chips, 3d. to $5\frac{1}{2}d$., one parcel 7d. per lb.; fair shavings, $4\frac{1}{2}d$. to 5d. per lb. Yellow: very common Calisaya chips, $\tilde{1}_{4}^{3}d$. per lb. Hybrid: ordinary

chips, $3\frac{1}{3}d$. to $4\frac{1}{3}d$.; fine shavings, 8d. to $8\frac{1}{3}d$. per lb. EAST INDIA CINCHONA.—Original.—Red varieties: common chips and shavings mixed, $1\frac{3}{4}d$.; ordinary dull to fair chips, 2d. to 4d.; good bright quality ditto, $5\frac{1}{3}d$.; fair small chips, 2d. to 4d.; good bright quilty ditto, $5\frac{1}{3}d$.; that sharing good bright shavings, 2d. to $3\frac{1}{2}d$.; dusty root, $2\frac{1}{2}d$. to 3d.; chips and root mixed, $5\frac{1}{3}d$.; long druggists' quill, 9d.; fine bold stout partly split ditto, 1s. 9d. per 1b. Grey varieties: fair to good bright quilly chips, $4\frac{1}{2}d$. to 6d.; good stout mossed chips, $6\frac{1}{2}d$. to 8d., one parcel 9d. to $9\frac{1}{2}d$.; small dusty shavings, 2d. to $2\frac{1}{2}d$. per 1b. Yellow varieties: fair chips and shavings mixed, 5d. to 7d.; one bright quilly chips 81d to 9d; one parcel (analysing 5.04 per cent. s.c.). chips, $8\frac{1}{3}d$. to 9d.; one parcel (analysing 5.04 per cent. s.q.), 71d. to 8d. per lb. Renewed.—Red varieties: fair to good bright chips, $2\frac{1}{2}d$. to 5d., one fine bright parcel 7d.; fair to good bright shavings, 3d. to 5d. per lb. Grey: chips, fair, $4\frac{1}{2}d$. to 6d.; fine bold quilly, 9d. to $9\frac{1}{2}d$. per lb.; fair yellow chips,

7d, per lb.

JAVA CINCHONA. - Original: Succirubra stem quills, bold and long, but damaged, 6d. to $6\frac{1}{2}d$.; dusty stem chips, $3\frac{1}{2}d$.; ditto root, 3d. to $3\frac{1}{2}d$. per lb.

SOUTH AMERICAN CINCHONA. - Of 230 packages of cultivated Bolivian Calisaya, 171 packages sold at full prices. Quilly chips, 4d. to $4\frac{1}{2}d$; medium to long fairly bright stem quill, $5\frac{1}{3}d$. to $7\frac{1}{2}d$. per lb. Four cases (416 lbs.) rcd quill, thin, damaged and colourless, imported via Hamburg, were withdrawn.

WEST COAST AFRICAN CINOHONA.—No less than 221 bales (28,269 lbs.) of bark grown in the Island of Sao Thomé were offered. The bark was imported in two consignments, viâ Lisbon, and 156 bales of it (19,169 lbs.) sold at comparatively good prices to German quinine makers and French druggists. Calisaya and Succirubra hybrid medium quill, fairly bright, but damaged, $4\frac{1}{2}d$. to 5d.; chips and shavings, $3\frac{1}{2}d$. to $4\frac{1}{2}d$. per lb. The greater part of this parcel was slightly damaged. The exports of cinchona from Java during the three months from July 1 to September 30, have been as follows:—

Govt. plantations, Amst. P.	1830 ns. 61,208	1889 18,264	1888 148,749	1887 170.295
Private ,, ,,	1,595 818	987,641	916,363	834,391
Total	1,630,026	1,170,283	1,035,112	1,034,636

COCAINE.—The market is somewhat dull this week, and although manufacturers quote from 24s. to 25s. per oz, there are some second-hand parcels obtainable below those figures.

COCOA BUTTER.—At the monthly auctions, which took place here on December 2, 300 2-cwt cases of Cadbury's brand sold at prices ranging from $13\frac{1}{4}d$. down to $12\frac{5}{5}d$., elosing at about 13d., the result being a decline of about $1\frac{1}{4}d$. per 1b. as compared with the November auctions. On the same day 70,000 kilos. of $Van\ Houten$'s cocoa butter (A) were sold by auction in Amsterdam. They realised from $68\frac{1}{4}$ to $70\frac{1}{4}$ cents per $\frac{1}{2}$ kilo. (= about $12\frac{1}{4}d$. to $12\frac{1}{2}d$. per 1b.), or rather less than the prices paid in London.

COPPER (SULPHATE).—Prices have advanced to 181. for London make, and 181. 10s. for finer brands.

CREAM OF TARTAR has declined still further through the week, but is slightly higher again to-day: the lowest point for best white French erystals was 94s., now it is 94s. 6d.; powder, 96s. to 96s. 6d. per cwt.

CUBEBS.—This drug still continues to arrive freely, and our stack is in reasing. The following figures refer to the exports of cubers from Java during the tirst quarter (July 1 to September 30) of each of the three last seasons, viz.:—1890, 313 piculs; 1889, 242 piculs; 1888, 108 piculs.

CUTCH.—The total exports of cutch from Rangoon during the period between January 1 and November 22 have been: 1890, 10,440 tons: 1889, 13,690 tons; 1888, 16,180 tons. The Liverpool market is firm, with sales of fine brands up to 34s. per cwt.

Gambier.—The market for block gambier has been firmer this week, and prices have slightly advanced. On the spot 22s. 3d. per cwt. has been paid, and for January February business is reported at 22s. $1\frac{1}{2}d$., rising to 22s. 3d. per cwt. At auction 534 bags free cube gambier were bought in at 37s. to 38s. per ewt., while 52 bales sea damaged pressed cubes sold without reserve at from 23s. to 25s. 6d. per ewt.

GINGER (PRESERVED).—At the spice auctions on Wednesday 1,453 cases of preserved ginger in jars were offered, of which about 300 sold without reserve at the following prices:—Uhyloong, ordinary old (12 jars), 14s; Chyloong stem (blue label), new season, 6 jars, 16s 6d.; 12 jars, 18s. 3d.; ordinary, 13s. 6d. Old Manloong, 12 jars, 12s.; dry Manloong, 48 tins, $6\frac{1}{2}d$. per lb. Of 554 easks, a small part sold at $3\frac{1}{2}d$. per lb.

GUINEA GRAINS.—The market is quiet, with small sales of fair quality at the recent decline—viz., 25s. per ewt.

Gum Arabic.—A small trade has been done privately in East Indian gums at steady prices; but at to day's auetions (about 2,400 packages being offered) the demand was exceedingly slack, and only a few lots found buyers—dark brown Amrad drop at 40s.; fair reddish scented Aden, 45s to 48s; good Ghatti, 45s.; ordinary to very fine pale clean Aden sorts, 39s. to 95s.; ordinary dark but bold Australian, 28s. 6d. to 31s; common brown blocky Cape, 13s. to 14s per ewt. A parcel of Scnegal gum of the Bas du Fleuve variety, now being landed at Liverpool, may be had at 72s. 6d per ewt. Of Brazilian gum, sales have been made at 21s. 6d. to 26s. per cwt.; and a tew lots of Mexican gum changed hands at 25s. per ewt. Of Niger gums the arrivals at Liverpool are reported to be exceedingly heavy.

Gum Olibanum.—At to-day's auctions common and middling grades sold at a decline of about 2s. 6 l. per cwt. Ordinary yellow to medium drop, 23s. to 29s. 6d.; common siftings, 12s. 6d.; good pickings, 20s. to 21s. 6d. per cwt.

GUM TRAGACANTH—Easier with sales of 131 packages at auction to-day, yellow seeonds, 7l, 15s to 7l, 17s, 6d.

INDIGO.—Telegraphie advices from Calcutta announce a decline for fine indigo at the last auctions, while Oudes

were eagerly bought up for the States at extreme prices. The market has since become much firmer, and is still rising.

ISINGLASS.—At the auction sales held on Tuesday 392 packages were offered, nearly all of which found purchasers at irregular rates, the competition being fairly good. Saigon leaf sold at an advance: ordinary brown to fair, 5s. to 6s 7d Brazil was 3d. to 7d. dearer for lump (ordinary to fine, 3s. 1d. to 3s. 11d.), but easier for toogue. Penang leaf full up: common rough to middling. 2s 1d. to 4s. 6d. Bombay leaf, which was in very large supply, suffered a reduction of 3d. to 4d per lb, but good new tongue and old tongue were decidedly firmer. West Indian brought 3d. to 6d. per lb. advance.

JABORANDI LEAVES—Sixty five bales, of about 1 cwt. each, arrived in Liverpool by the *Clement*. They show a somewhat mixed quality, and contain some dry brown leaves; 7d. per lb. is asked.

JALAP.—The New York market in the latest mail reports, dated November 25, is stated to be easier, and good quality is being offered at 1s. 75d. per lb., c.i.f. terms.

Kola Nuts.—In Liverpool prices are slowly declining, 5d. per lb. has been accepted for green kolas and 1s per lb. for ordinary quality dried seeds. At the spice auctions on Wednesday 4 packages dried West Indian kolas (from Grenada) sold at 1s. 3d to 1s 6d. per lb. for mouldy, and 1s. 9d. per lb. for good sound quality.

MERCURIALS have not been affected by the alteration in the price of quicksilver; they are still held on the basis of 3s. 7d. for calomel.

OIL (ALMOND).— The English makers of sweet oil of almonds still quote 1s 10d. per lb., but foreign and second-hand oil may be had rather below that price; the raw material, however, is scarce, and still rising in value.

 \mathfrak{F}_{0} OIL (CASTOR).—The Liverpool market is recovering from the depression which has prevailed in it lately; all the available supply on the quay has been bought np, and holders of good *Culcutta* seconds have been able to raise prices slightly per 1b., sales having been made from $3\frac{\pi}{10}d$. up to $3\frac{\pi}{10}d$. per 1b. First pressure French oil is also worth $3\frac{\pi}{10}d$. per 1b.

OIL (COD-LIVER).—Firmly held at 68s. 6d., c.i.f. terms, for good brands of non-congealing Norwegian oil.

OILS (ESSENTIAL).—Star-anisc very quiet at 6s. 6d per lb.; small sales only have been made at that price. The c.i.f. quotation comes at 6s $3\frac{1}{2}d$. per lb., but that is too high to admit of business. Cassia sluggish; fair quality on the spot is worth 3s 9d, to 3s. 10d per lb, nominally. For arrival 3s. $5\frac{1}{2}d$, per lb, c i.f. is quoted. Citronella is worth $\frac{13}{16}d$, per oz. on the spot for fair native quality, and for arrival $11\frac{1}{2}d$ per lb. e.i.f. is asked for tins. Lemongrass oil on the spot is $1\frac{3}{4}d$ per oz., and for arrivals the quotation is $1\frac{1}{2}d$. per oz. e.i.f. terms. The following are the principal features in American essential oils: Peppermint H.G.H. is keeping well up in price, and olders below the parity of 15s. 3d per lb. c.i f. terms were refused on November 25. The stock of bulk oil in the farmers' hands is reported to be very small, and there does not appear to be any prospect of lower prices. In London H.G.H oil has sold to-day at 14s. 41d. per lo., and now 14s 6d is generally wanted. Wintergreen oil in tins is being offered at 7s 9d. per lb. c.i.f. from New York. Sassafras oil is again lower in America, and is in America, and is being offered at 1s $8\frac{1}{2}d$. per lb. c.i.f. terms for quantities. As regards Italian essential oils, the Sicilian crop of oil of lemon is very late this season, and prices are again dearer, from 6s 4d. to 7s. per lb., f.o.o., being asked for the best brands. There is more doing in the article, and the market rules in holders' favour. Bergamot and Orange unaltered. Japanese oil of *Peppermint* unchanged, at 5s to 5s. 6d. per lb. for lair quality. *Menthol*, very firm and tending higher, with sales at 9s. 9d per 10, for good white crystals. There has been a strong advance in English Oil of peppermint this week. The stock of both old and new oil in Mircham is said to be almost cleared now, and from 25s. to 26s. per lb. is asked for good quality oil.

OILS (VARIOUS).—Corton-secd oil is decidedly cheaper, and refined may be had at 18s. to 19s. on the spot, while

crude is only worth 15s. 9d. In Liverpool, American oil is quoted at 20s., and Liverpool refined at 18s. 9d. to 20s. Hull prices also lower: Refined, 16s.; and crude, 14s. $7\frac{1}{3}d$. naked. Cocoanut oil: Ceylon steady, at 31s 6d. for fine quality on the spot, while for near at hand 28s. 6d., cif. terms, is quoted. Cochin has advanced, and is now worth 33s. 6d. to 34s. 6d. on the spot, according to quality, while for distant delivery 32s. 6d., c.i.f. terms, is asked. Linsced oil has had an advance early in the week, but prices have given way again, and business has become slow: London, 21s. 6d. to 21s. $10\frac{1}{2}d$.; Liverpool, in export casks, 22s. 3d to 23s.; and Hull naked, 20s. 3d. Olive: Eating oils are all unchanged in price, but firmly held. Cargo oils quote as follows: Spanish, 42s. to 43s.; Messina, 41s.; Mogadore, 37s. to 37s. 6d. The market rules very firm, with comparatively small stock and good demand. On the Spanish markets business in Olive oil is rather in held. The new Spanish crop, which will be a moderate one, is held for a sharp advance, and stocks of old oil in the interior are reported quite exhausted. Palm oil: Fine Lagos is worth 27s. to 27s 6d. here; the Liverpool market is steady with a fair amount of business, fine Lagos at 24s. 9d. in transit. Petroleum cheaper at $5\frac{1}{3}d$ to $5\frac{7}{16}d$. for American, and $5\frac{3}{3}d$ to $5\frac{5}{16}d$. for Russian oil. Rape oil has advanced: refined 28s. 3d. to 28s. 6d.; brown oil, 26s. 9d. to 27s.; the Liverpool market is steady, refined Stettin at 34s, while for English and Belgian oil 29s. is asked. Turpentine 6d. lower; American oil on the spot 29s. to 29s. 3d.

POTASH SALTS.—Bichromate in fair demand, at $3\frac{3}{4}d$. per lb. Chlorate is firmly held for $5\frac{1}{2}d$. per lb. on the spot, and at 6d. per lb. (less disconnt) for next year. English yellow Prussiate is worth from $9\frac{3}{4}d$. to 10d per lb., and firm at that price. German refined Saltpetre, 18s. 3d. to 18s. 6d. per cwt. Pot and Pearl ashes remain very firmly held, in consequence of the paucity of arrivals from America. The present Liverpool quotations are 40s per cwt. for pearlashes, and 34s. 3d. per cwt. for first Montreal pots.

QUICKSILVER.—Early in the week the principal importer suddenly brought down his price from 10*l.* to 9*l.* 2*s.* 6*d*, at which figure he sold about 5,000 bottles, subsequently raising his price to 9*l.* 5*s.*, at which it now stands. Second-hands slow of sale at 9*l.* 2*s.* 6*d.*

QUILLAIA.—The price remains very firm at 18s. 6d. per cwt., with a very small and diminishing stock.

QUININE.—There has been a somewhat better feeling in the market this week, although the sales reported only amount to about 40,000 oz.—second-hand German bulk at $11\frac{3}{4}d$. to 12d per oz, and some Brunswick, from the makers', at 12d. per oz. for April-May delivery. There would be further buyers at 12d. per oz. for forward delivery now, and also at $11\frac{3}{4}d$. per oz. spot, but there is nothing to be had at those figures. The B. § S. agents have refused all offers below 13d. per oz. for January/February, and hold firmly at that quotation.

SAFFRON.—The prices of Spanish saffron seem to have tonched bottom last week; we now hear of a recovery of 1s. to 1s. 6d. per lb. from the lowest point.

SENEGA.—Higher prices come from America, where the dealers in the Western States are said to have advanced their quotations all round. The quotation here for good root is 1s. 10d. to 1s. $10\frac{1}{2}d$. per lb. c.i.f., and 2s. per lb. on the spot.

SHELLAC.—After closing last week with a decidedly better tone, and sales for delivery of nearly 2,000 cases upon a basis of 91s to 92s. per cwt. for December TN, the market relapsed into a dull state in the beginning of the present week, and Second orange (TN) for December delivery could freely be had on Tnesday for 89s. per cwt., but there were no buyers at that price. At the auctions 659 cases were offered, of which only 202 sold at some slight decline. There were nearly 300 cases Garnet lae, all of which was bought in at nominal rates. The following were the prices realised for Orange: First worked red BSSL, of old import, 89s.; fair to good second ditto, 86s. to 87s.; blocky, 84s.; unworked seconds, fair cakey to ordinary reddish, 84s. to 86s. per cwt. At to-day's call the shellac quotations were again

lower, and the market closes dull and depressed. The following are the figures:—

Orange TN, sellers 100 84/6 81/6 80/ 78/

, buyers . .. 85/ 82/6 80/ 76/ 74/

Garnet is quite nominal; the value of good AC on the spot is about 80s. Fine orange lacs are worth from 102s. 6d to 107s. 6d. per cwt. The exports of shellac from Calcutta during the month of November are returned as 8.200 [:wt. of which 7,700 cwt. were shipped to the United Kingdom, and the rest to the States.

Soda Salts — Ash firmly held at $1\frac{1}{10}d$. to $1\frac{3}{4}d$. per degree, landed. Bicarbonate steady at 8l. to 8l. 10s., according to packages Chlorate, which is now superseding chlorate of potash in certain industries, is held for $6\frac{3}{4}d$. per lb. Caustic lower: 70-per-cent. spot, 11l. 7s. 6d. to 11l. 10s.; delivery next year, 11l. Crystals steady at 62s. 6d. to 63s. ex-ship London. Nitrate from 7s. 6d. to 8s. 9d., according to quality. Rochelle salts have been advanced in price by the makers.

Spermageti.—A very firm market. English and American refined has changed hands at 1s 4d. to 1s $4\frac{1}{2}d$. per lb. ; and holders are now inclined to ask 1s. 5d. per lb.

SPICES.—Arrowroot: Of 426 barrels St. Vincent arrowroot, about 300 were sold without reserve yesterday at $2\frac{1}{2}d$. to $2\frac{5}{8}d$ per lb. (import 1886 to 1888); 200 tins fine quality 1888 import, were sold without reserve at 3d. to $3\frac{1}{8}d$. per lb. From the West Coast of Africa there have been considerable arrivals of Capsicums in Liverpool, which are selling in a small way at 20s per cwt.; 60 bags fine small quality, without stalk, were bought in at 25s per cwt. Cassia Lignea: Cheaper; about 200 bags of fair quality selling at 24s. per cwt. Chillies: Slow of sale, the entire supply of Zanzibars being bought in yesterday at from 38s. to 42s., according to Cloves have been dull through the week, with sales in the private market of fair Zanzibars at 4d per lb. At the auction 372 bales were offered, of which only 40 sold at that price; one box of common West Indian so d at $2\frac{1}{4}d$. per 1b. Ginger: Cochin without alteration, and very dull of sale. Of 165 packages, about 100, mostly of old import, sold at 20s. to 21s. 6d for small washed rough, and from 28s. up to 63s. for small to good bold cut; Jamaica ginger quiet, with small sales of Rhatoon; ordinary dull and lean, 68s. to 75s.; medium to bold, 78s. to 114s; and very fine pale, 113s. per cwt. Mace finds a steady though slow sale: good to bold pale Penaug, 2s. 6d. to 2s 10d; ditto fair West Indian, 2s 6d to 2s. 7d. per lb. Nutmegs in large supply, with a flat market, and ½d. to 1d. lower in price. Of West Indian the packages were found and reaches and all the packages were found and the pa offered, and mostly sold. Black pepper has advanced in price to some extent during the week, good Singapore having been sold privately at $4\frac{1}{2}d$; Tellicherry at the same price. At auction 872 bags were offered, and firmly held by owners, only a small quantity being sold at the same rates which have been privately paid. White pepper has also been dearer in the private market, with sales of Penang at $5\frac{3}{8}d$ to $5\frac{1}{4}d$, and good Siam at $7\frac{3}{4}d$. per lb. At auctions, however, prices declined $\frac{1}{4}d$. per lb., Singapore bringing $\frac{8}{8}d$. to $\frac{8}{4}d$. for fair, and Penang ditto, $\frac{5}{8}d$. to $\frac{5}{4}d$. Princento depressed and falling in value; about 600 bags were sold at a decline of nearly $\frac{1}{8}d$.; dark to fair, $2\frac{1}{4}d$. to $2\frac{1}{2}d$. per lb.

Tonquin Beans.—Fresh parcels are still arriving in Liverpool, 25 cases being landed this week. The quality varies considerably, and the beans are selling at from 2s. up to 4s. per lb.

CHEMICALS IN THE NORTH OF ENGLAND.

THE chemical market continues very steady, and prices for nearly all products have been maintained at their full values, with the exception of Caustic Soda, which has been reduced in price to the limit fixed by the union. Sulphate of Copper has slightly improved, and the market for this article is tirmer. Bleaching-powder, although quoted at full rates by manufacturers, is being offered in the Liverpool and Newcastle markets by middlemen (who bought ahead before the late advance) at a reduction of 2s. 6d. to 5s. per ton under makers' prices for prompt delivery.

BICARBONATE OF SODA firm and searce, at 7*l*. 17*s*. 6*d*. per ton on rails, and 8*l*. per ton in 1-cwt. kegs f.o.b. Liverpool, prompt delivery.

BLEACHING-POWDER during the last few days has shown signs of easiness, owing to second hands offering under market prices. For prompt and forward deliveries softwood casks are quoted 6l. 12s. 6ll. per ton on rails Widnes and and St Helen's, and 6l. 15s. per ton f.o.b. Liverpool; hardwood casks quoted 7l. per ton f.o.b. Liverpool. Glasgow price, 6l. 12s. 6ll. per ton on rails. Tyne market quiet, with little doing at present. 6l. 15s. per ton in softwood, and 7l. per ton in hardwood easks are makers' prices, but these quotations would be shaded considerably by some sellers.

Caustic Soda quiet at the moment, and price reduced 5s, per ton all round. For this month's delivery 60-percent is quoted 10l.; 70-per-cent., 11l. 5s.; and 74-per-cent., 12l. 5s, f ob. Liverpool. The strike at Messrs. Pickington & Son's works in Widnes will slightly reduce the output of caustic. The Newcastle market is firm at 12l. for solid, and 16l. for ground, net cash. 70-per-cent. is 11l. 5s. per ton, less $3\frac{1}{2}$ per cent., f.o.b. Tyne. For forward deliveries prices are 5s, under present prices.

CHLORATE OF POTASH.—Firm, at $5\frac{3}{8}d$. to $5\frac{1}{2}d$. per Ib., less 5 per cent., f.o.b. prompt, and 6d. per Ib. for forward, at usual ports of shipment.

CREAM CAUSTIC.—Scarce, and little offering. For prompt price is 91. 10s per ton on rails, and 91. 12s. 6d. per ton f.o.b Liverpool.

HYPOSULPHITE OF SODA maintains the late advance, and demand continues brisk. For prompt, packed in casks, price is 6l.; in kegs, 6l. 10s., both less $2\frac{1}{2}$ per cent., f.o.b Tyne. For delivery in Liverpool and Manchester price is 7l. 5s. and 6l. 15s. per ton for kegs and casks respectively.

SODA ASH continues very firm, and makers are well sold for present. Caustic ranges from $1\frac{5}{16}d$. to $1\frac{3}{8}d$. per degree, and Carbonated $1\frac{3}{8}d$. to $1\frac{1}{2}d$. per degree, less $3\frac{1}{2}$ per cent. discount, f.o.b. Liverpool. Tyne market rather more doing at full union prices of $1\frac{3}{8}d$., less $3\frac{1}{2}$ per cent., for carbonated. No change to report in forward prices.

SODA CRYSTALS.—Market quiet, at 3l. 7s. 6d. on rails, and 3l. 10s. f.o.b. Liverpool; 2l. 16s. per ton, gross weight, f.o.b. Tyne. These quotations are for prompt and forward deliveries.

SULPHATE OF COPPER.—More doing, and market stronger; 181. 10s. to 181 15s. per ton, less 5 per cent., for prompt, and 191. 15s. to 201. per ton for early months of 1891.

SULPHATE OF SODA.—Very steady, and more inquiry for next year. For prompt, price is 40s, per ton in bulk, on rails Widnes and St. Helen's. For $1891\ 2s$. 6d. per ton more is asked. For this month and forward over $1891\ Tyne$ makers are quoting 42s. 6d. per ton in bulk, and 53s. per ton in ca-ks, less $3\frac{1}{5}$ per cent., f.o.b. Tyne.

COMMERCIAL GLYCERINE.—According to Vizern there is no definite relation between the proportion of actual glycerine in a sample and its specific gravity and boiling point, so that on these bases it is not possible to ascertain the value of a crude glycerine.

THE PUBE VINEGAR-PLANT has no action on cane sugar, yet the plant is used in many households for making gingerbeer and vinegar, and Mr. Adrian Brown explains the apparent anomaly by stating that yeast-cells arc in the ordinary conditions attached to the plant. The raw vinegar-plant consists of bacteria embedded in a structureless film. These bacteria assume several shapes, and are not unlike some of the forms of bacterium aceti; whilst the best temperature for growth coincides with that for the acetic ferment—namely, 82° F. Placed in similar fermentable liquids the two ferments act very much alike; they oxidise alcohol into acetic acid, and their action upon the carbohydrates is identical.

LONDON DRUG STATISTICS.

THE following figures refer to the stocks of drugs in the port of London on November 30, 1890, and to the imports and deliveries during the first eleven months of 1890.

	St	ocks	Im	ported	Del	Delivered			
Artiole	1890	1889	1890	1889	1890	1889			
Aloesos & pkgs ,,gourds Anise, Starohts Arrowrootcks ,, bxs & tins Balsamsoks, &c.	10.057 1,155 50 8.701 2,533 2,183	8.152 1,351 71 11,899 5,348 2,297	7,217 592 14 12,648 250 813	4.083 378 40 13,454 1 878 284	4,180 181 154 15 227 1,533 991	5,393 781 35 15,158 3,811 783			
Bark (Cinchona), S.American cases bls. &c. E.I., Ceylon, and	408 26,186	464 32,077	7,518	12,168	49,162	71 13,529			
Borax os bls, &c. Borax pkgs Calumba " Camphor " Oardamemschts Cochineal pkgs Occo. Ind. bgs, &c. Oream of Tartar cks Cubebs bgs Dragens' Blood chts Galls, China, &c. cs Turkey &c fks Gums—	345 24,164 261 1,348 5,064 684 3,828 252 29 120 104 3,073 3,804	472 26,303 491 1,768 102 1.2/6 4,126 172 10 322 132 858 4,695	447 12.838 2,459 3,701 787 116 264	993 45,480 £4 80 2,762 3,1,6 3,410 120 31 €59 193 2,542 9,390	360 331 5.041 2,619 5,126 324 279 461 130 8.995 6,280	470 39.778 236 983 7,867 3,025 4,282 707 97 444 174 3 533 7.732			
Ammeniae pkgs	46	91	6	6	78	51			
Animi & Oopal pkgs Arabic, Asafestida, Benzoin, Damar, Galbanum, Gamboge, Gusiacum, Kino, Kewrietns Mastiopkgs Myrrh, Olibanum, Bandarac, Tragacanth., Indiarubber,E.I. tns Madagascar S. America African. &c, Indigo, E.I chts , Spanish srns Ipecacpkgs Jalapbls Lac Dyechts Nux Vomios pkgs Oils— *Aniseos *Jassia, Castoroks	7.894 16,376 869 2,6-5 6,793 31 37 49 484 790 18 397 4,814 248 5,525 207 49 47 251 7,023 748 197 64 5,094 512	9,530 23,558 458 2,132 5,286 12 57 116 1,537 421 3,889 252 7,436 280 21 154 3,811 1,331 219 71 75,700 789 29 18 345	11,236 21,941 799 3,509 7,870 24 23 17 421 8,139 1,153 6,334 710 201 231 786 19,330 3,358 1,068 19,530 5,558	13,157 28,935 9311 3,272 7,487 115 66 2,657 780 8,763 551 128 205 5780 205 3,607 1,093 1 1,342 248 248 248 248 248 248 248 248 259 1,099	9 405 30.625 1.436 2.473 6,183 12 285 35 35 383 619 5,649 1,413 1 843 603 1,67 6184 4 163 1,063 1,79 615 5,313	13,029- 27,391 301 2,937 6,263- 261 69 97 2,439 26 466- 7.058- 1,285 8,197 750 191 226 841,4355 842,17 180 1,670 228 319 1,999			
Oscoa-nuttns Olivecks.co. Palmtns Rhnbarbchts Safflowerbls.&c. Saltpetretns Nitrate of Soda ,, Sarsaparillabls Sennabls. Shellac, Orange os, &c. Garnet, Button,	1,796 799 853 13 836 317 421 1,266 264 4,2c5 34.397 4,559 5,622	2,381 2,836 799 16 951 457 216 1,645 322 2 868 41,103 10,683 6,154	5,904 3,590 5,439 57 1,471 119 4,346 20,3:9 1,110 6,720 22,995 4,603 7,700	5,014 5 455 3,896 89 1,355 72 3,728 14,360 1,145 4,363	7.325 5.404 5.3.4 63 1,4.4 202 4.125 20,137 1.21 5 601 29,428 9 896 8.338	9.641 4,037 3,446 133 1,427 205 4,192 14,574 1,209 3,390 24,336 11,048 7,762			
Total cs Sticklaccs, &c Gambiertns Cutch, Turmeric, Beng. tns Madras, &c,	44.518 2.039 1.290 2,851 982 628	57,940 3,159 492 3,081 1,383 1,260	35,298 58 11,495 1,892 26 196	31,357 1,150 8,317 3,800 445 111	47.662 1,085 10.869 1.646 439 723	43.146 1 818 8.983 4.079 640 595			
Totaltns Vermilion, chts, &c. Wax, bees'brls &	1,610	2,643	222 149	556 127	1.162	1,135. 126			
, cks & os , cakes , Japanpkgs	1,463 1,008 14 1,133	1,400 1,007 10 1,510	4,760 2,515 83 502	1,906 2,696 205 1,2:8	1,196 2,723 9? 2,122	4,025 2,403 93 964			

^{*} The stocks of oils of anise and cassia at Smith's warehouse and Brewer's quay, the principal storage places for these articles, are kept secret.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c., will be attended to in the order received.

The Pharmacy Bill.

SIR,—With reference to the recent meeting of Bristol chemists I beg to state that the report furished to you and to the editor of the *Pharmaccutical Journal* by our hon. sec. was correct, and that I fail to see in what respect you have "some reason to complain."

For myself, as chairman, there was no other course open than to declare the resolution to have been carried unanimously, there being no challenge when I put it to the

meeting.

To the six gentlemen, my neighbours, who addressed you last week, I have but to say that I am sorry it was not possible to give in detail the words uttered during the discussion. Our secretary does not profess shorthand. But the impression of their views gathered by me was that, although they much desired to see other matters in the Bill, they quite agreed with it as far as it went. I would remind them that no one formulated either an amendment or a second resolution; and that therefore, if my impression of their final acquiescence was erroneous, the fault was altogether their own.

Yours very truly,

JAS. W. WHITE.

52 Royal York Crescent, Clifton. December 1.

SIR,—A very faithful report of the Leeds Chemists' Association meeting appears in your issue of November 29. May I call attention to the significant figures with which the article closes, and which are, I think, as nearly correct as is possible without an actual counting of heads and hands. Over 80 persons present: for the Bill 30, against 15, leaving 35—nearly half the meeting—who took no part in the If "those who are not with are against"—and in this case I think the rule fairly applies—the numbers indicate a clear majority against. Many, I have no doubt, remained neutral in deference to the feelings of Mr. Carteighe, while with others the amendment proposed was not such as they could snpport; but seeing that those favouring the proposals were an organised party, with proposer, seconders, &c., fully prepared for their duties, and with all the advantages of "platform" seats, while the opposition was without any prearranged plan of action, the result was not merely a "moral," hut an absolute, defeat

In considering this Bill I should like to remind my fellow-chemists who live in the country of one among the many disadvantages which I consider looms before us should it pass in its present form. When reference was made at the meeting to the difficulty attending a compulsory curriculum for country students, we were met, not by argument or sympathy, but by sarcastic and cynical references to the desirability of young men serving their apprenticeship in "civilised centres." I have yet to learn, sir, that the relative proportion of the "residunm" in the country towns is greater than the acknowledged "submerged tenth" of our large cities. The result of the passing of this Act will be that, while the large towns will be placed under the "most-favoured-nation clause," the country will be a "boycotted district." When

a paront wishes to apprentice his son he will naturally and inevitably shun the small centres of population, because this proposed apprenticeship curriculum will make such a sphere both undesirable and detrimental. I am not one of those who undervalue or neglect education—enclosed cutting from to-day's local paper will show this [report of a town council committee moved for by Councillor Maud, in support of technical and secondary cducation.], but I maintain that compulsory education. if not free, should at the least be equally available to all. We in the country have to compete with our more intellectual and highly cultured town relations, and have much against us imposed by the circumstances under which we live. Our environment is perhaps not the most favourable; we. therefore, protest against having further artificial barriers erected to impede us in the husiness race. Is it true, however, that the country lads are more stupid or less capable than those whose apprenticeship has been served in large centres? Let the fact of the known anxiety of Londou chemists to get country-trained young men as assistants speak for itself. Whatever may be lost in "cuteness" is probably more than counterbalanced in moral and physical fibre. But I have already taken up too much of your valuable space, and therefore close.

Pontefract, I am, faithfully yours. November 29. W. R. MAUD.

SIR,—After carefully reading the many excellent letters which have appeared in the correspondence columns of THE CHEMIST AND DRUGGIST, may I suggest that you should take a post-card vote of subscribers to this valuable trade journal? As the subject seems to be thoroughly thrashed out it would he interesting to learn the numbers for and against the Bill as formulated and recommended by the Pharmaceutical Council—i.e., minus the companies clause. I think that the power to vote should be possessed only by those who subscribe to the Pharmaceutical Society, either in the capacity of members, associates, or apprentices; for I fail to see that those who do not support the men alone capable of formulating and presenting our just demands before Parliament can have any right to expect increased trade advantages from the Society's labours.

I am, Sir, yours faithfully,

W. E. CLARKE.

363 Kennington Road, London, S.E., December 2.

[Chemists who do not subscribe to the Pharmaceutical Society are as much affected by an Act of Parliament as those who do.]

SIR,—I drew np the following resolution from suggestions made in your journal, and attended the meeting at Manchester fully intent on proposing it there, hut Mr. Carteighe's persistent eloquence and the widows clause (which I trust will never he given up) together were too much for me. Why should not the various local secretaries in every town in the kingdom get the signature of all the chemists in their district and forward it to their respective members of Parliament, asking, if such a clause were inserted, whether they would vote for it? My resolution would have been thus worded:—"That the title of 'chemist and druggist' under this Act shall apply only to the person or persons who are bonâ-fide owners of the business, superintend and pay the assistants, are responsible to the public for the proper performance of their duties, and receive all the profits arising out of such business."

The spirit of fairness is not dead, and our members know that we are entitled to such protection—many of them keen business men and by no means short of sense. We must make our protest now, or for ever hold our peace. If this Pharmacy Bill goes before Parliament without some such clause, we tacitly allow company pharmacy, and seal our own lips for the future that the chemist and druggist is as much entitled to protection as the lawyer or doctor in the humble opinion of

J. T. CLARKE,

Altrincham. Local Secretary Pharmaceutical Society.

SIR,—I notice references to a so-called "widows clause" by many of your correspondents. I presume they refer to

section 16 of the Pharmacy Act, 1868. That elause is a good deal more than a "widows clause." The executor, administrator, or trustee of any deceased chemist may carry on the husiness for an indefinite period. The chemist may not have been married, and there may be no widow in the question. I know of several cases where the deceased chemist was a young man, and the husiness has been carried on for many years by his father, or some other relative (or relatives), acting as executor, and employing a qualified assistant.

That is to say, the present law allows one or more unregistered persons to carry on a chemist and druggist's business, provided they employ a qualified assistant. This may be an exception to the general principle of the 1868 Act, but it is a clear admission that unqualified persons may carry on a chemist's husiness, by employing a qualified assistant, without any danger to the public safety.

If seven unqualified persons may safely do such a thing as executors or trustees, how can it be fairly argued that it would be dangerous for the same seven unqualified persons to do it as a limited company or corporation? This is a fundamental difficulty which I have never yet seen fully

handled hy anyone.

Some, of course, say that the 16th section is fatal to the true principle of the Act, and ought to be repealed. Before that can he done it will he necessary to prove that the permission granted hy section 16 is so dangerous to the public safety that it should not be continued. Is it possible to prove such a charge ?

I would strongly support any plan that would stop company pharmacy, hut no such plan has yet heen produced.

I am, yours, &e.,

December 2. Pharmacist. (189/4.)

[The distinction which *Pharmacist* fails to appreciate is that the exemption in the 16th section is inserted to protect property legitimately acquired, while the establishment of a chemist's business by seven unqualified persons incorporated as a company is an evasion of the statute. If our correspondent argnes that an Act of Parliament should not be enforced unless it is absolutely logical in all its effects, he is aiming at an unattainable condition.—Ed. *C. & D.*].

SIR,—Curriculum without protection is monstrous. Mr. Carteighe is no doubt an able man and a splendid speaker, but his reasonings and arguments are supported only by

flowery language, without common sense.

Curriculum is in itself an excuse and an opportunity for the insertion of a clause of a protective character. Carteighe tells us boldly (eredit to him for his candour) that "the Council cannot henefit the trade until they all join the Society and support its efforts." Has he ever tried simply to henefit the trade? How can he expect the trade to join the Society when the Society's efforts are directed rather to injure than henefit the trade, and with an endeavour to annibilate their feelings and opinions. What trade on earth would join a Society which declares that it eannot do anything to benefit that trade. There will he no lack of support, or cry of no unity, if the Society will make an effort to benefit the trade. Carteighe, Hills, Gostling, & Co. are the disunionists, by denying the trade a voice in the matter. Let them leave the trade alone if they will not do anything to henefit it. We have had sufficient Acts of Parliament and seen too many of Mr. Carteighe's buhbles for several years past to need any more, however pretty they may seem to him. A bubble-hurster's occupation may be a very innocent amusement, hut he should consider those who have to look ont and see that the hubbles do not injure their vision; besides, they have something hetter to do. Mr. Carteighe and the Council have no doubt the ability to do all that ean be done, if they would but put in the will, and not tell us to our faces that they "could not henefit the trade.

Curriculum and protection should go together: they do on the Continent, and why not here? Until the two ean he united the present proposed Pharmacy Bubble Bill should he allowed to burst in the air. To talk of a chemist's "legal privileges" is a cruel farce, while any man—be he a publican, a greengrocer, an oilman, or a draper, —can and does usurp all his privileges. Any company, without body or soul, can he a chemist and druggist. What a ghostly title! And this is not all. There are very few oilmen and grocers

who do not sell drugs by the pennyworth—the mainstay of the majority of pharmaceutical chemists and chemists and druggists—a pennyworth of jalap, of salts, of senna, of bicarbonate of soda, &c. This on one side, and the "stores" on the other, selling three-penny bottles of tincture of rhuharb, myrrh, senna, cardamoms, &c.; and, before and behind him, the greater companies dispensing prescriptions. What glorious "legal privileges" are thus left to the chemist! Chemists are a patient, forbearing, downtrodden class, put upon by everybody. It is a wonder one is not ashamed to speak of the "legal privileges" of a chemist; but there does not appear much shame, as they even go so far as to talk of depriving a chemist's widow of her mite. Shame!

Moreover, what is to prevent anyone-man or womanfrom setting up a drug store? He can put into his window the "show-hottles," set out in style patent medicines and proprietary articles, exhibit fine specimens of drugs and chemicals, write over his window "J. Smith, Drug Store," or "Pere Drug Store." He can add the sale of groceries, spices, brushes, pots and kettles, and sapolio. The prescriptions he would send to his curriculum chemist, and poisons he would not keep for fear of injuring his fellow creetnres or contaminating his pure drugs; he would thus get as good a living as most chemists on the Register. The public and the trade need protection, and it is the dnty of the Council to see to it. Drugs and chemicals sold for the phrpose of administration as medicines should he sold only hy those who have a thorough knowledge of what they are selling, and are able to answer any questions as to their properties, &c., or to give such caution as may be necessary. the services chemists render to the public in way they are entitled to protection by the State. The amount of evil prevented by chemists is enormons, and deserves recognition from the State. How many people will swallow 2 oz. of Epsom salts for a dose, 2 and 3 oz. of castor oil, if not cantioned by the chemist? People will come and purchase half an ounce of iodide of potassium, and get the same quantity at several other chemists' as they pass by, and take continued large doses of this powerful remedy. Bromide of potassium, antipyrin, and many other drugs and chemicals are often taken almost ad libitum hy the customer nntil cautioned by his henefactor the chemist. How many accidents, which would be of a most serious nature, are averted by chemists when persons, generally the young, come to purchase such chemicals as mercury and nitric acid? Let our opponents go to the hospitals and there learn something of the awful amount of destruction of health cansed by the improper use of drugs and ehemicals purchased from oilmen, grocers, and stores. Is it any wonder that our hospitals are always so full of patients and so many sickly people are seen walking through the streets daily when they swallow so much medicine without advice or a caution heing given? high time the State stepped in and gave to ehemists curriculum with protection, hnt let us fight hard and to the last that we do not get the former without the An educated chemist should be a public necessity, bnt it is most unjust for the State to force an education upon him sufficient for the proper discharge of his calling, which is as much or more for the henefit of the public as for himself, without affording him some protection beside the right of selling certain poisons. I hope the Council will see their way to alter the Bill, if a Bill we must now have, to meet the wishes of the trade in the way of protection. I fear I have trespassed too much on your space, hut I must say you deserve the thanks of the whole trade.

68 Fleet Street, Yours truly,
December 3. Geo. P. Pond.

SIR,—I did not intend to take any part in the discussion now appearing in your columns upon the proposed new Pharmaey Bill, hecause you have given expression to the position so admirahly, and I am thoroughly at one with you on the question.

But after reading Mr. C. C. Bell's letter in last week's Chemist and Druggist and your remarks thereanent, I cannot help suggesting that you might send out a form to all your subscribers, asking their opinion upon a company clause; and, if in your wisdom you deem it necessary, an

expression on the retention or non-retention of the widows

clause might also be sought.

It seems to me that the trade requires some one to lead them and gather up their opinions, and that while our peripatetic President is stumping the country, endeavouring to rouse the trade on "curriculum," with perhaps poor success, you, sir, are the one hest suited to rally the forces on the other, or trade, side of the subject.

I am, yours, &c, CALEDONIA. (186/28.)

We have a great many letters from chemists, not intended for publication, endorsing our arguments in reference to the Pharmacy Bill; but a note from the other side is such an event that we quote from one received a few days ago. We do not print the writer's name as we assume the letter was only written for our private edification. The writer (270/32) says :- "I admire your journal for its smart husiness intelligenee, &c., but I must say I disagree with your opinions on widows clause, and that if you stir up opposition, as it appears likely, you will certainly wreck this Pharmacy Bill, in which case I for one should discontinue my support and use every influence with my brethren. If twelve or eighteen months is not sufficient for a widow to sell her business to advantage, I do not know what is, and if that is allowed to go on indefinitely, why how can we ask for stores to be stopped if they give the same security to the public as a widow? I say, let ns have half a loaf first, then go in for the other afterwards; better have half than none. I should not have written (as I have no time to enter into a correspondence in your journal) but I felt you were taking up this opposition in a manner which if persisted in would certainly tend to keep us from unity." We suppose we are all inclined to the opinion that it is always the man on the other side who prevents unity On this question our correspondent may as well resign himself to the conclusion that there is no chance of it. The question is not quite simply one of demanding a half-loaf or a whole one: it is whether the trade shall endorse a manifesto which tacitly surrenders its most serious claim.—ED. C. S. D.

Pharmaceutical Education in Ireland.

SIR,—Will you give me a little space in your journal to give expression to the fears that press npon me relative to the future of pharmacy in Ireland from an educational point of view?

My voice may be that of one crying in the wilderness, but even if I stood alone, I must protest against the glorification of the cramming system which hids fair to degrade for all

time the status of the pharmaeist in this country.

Here he has hither o enjoyed the support and confidence of the medical profession, and has deserved it. Our medical practitioners have not encroached upon the sphere of work of the dispensing chemist, and have left to him a distinct and respected position. Can we hope that a state of things will continue when, while the education of the medical man is steadily advancing, and while the length of his curriculum is being much extended, the short and the tall, the stout and lean, are heing squeezed for three months or so into a common mould, and shot out through the discharge pipe of an examination necessarily more or less stereotyped?

Can the product of such a system be anything hetter than

a mechanic more or less skilled?

This condition of things has been confirmed by the School of Pharmacy conducted by the Pharmaceutical Society of Ireland, which may be characterised as grinding in excelsis

I give every credit to this grind as a most successful one, $qu\hat{a}$ grind, as shown by the results of late examinations. The teachers are men of great experience and ability, and are eapable, with larger opportunities, of earrying to their

pnpils a high-class pharmaceutical education.

What I complain of is that this school has none of the features of a school of pharmacy properly so called. It has no published regulations, no fixed curriculum, no course and term of studies. The only compulsory term required by the Society—that in practical chemistry—has recently heen described by the President as "of doubtful utility."

On your side of the Channel we see the leaders of pharmacy

using every effort to raise the pharmacist to the position of a skilled professional man. I appeal to them to say whether the education afforded by this grind is such a one as they contemplate under their proposed regulations. I ask the experienced teachers of Bloomshury Square, especially Dr. Attfield, who has done so much for the cause of true education in England, is a three months' grind, which is now the highest water-mark of pharmaceutical education in Ireland, likely to turn out any Martindales or Threshes or Umneys? If such be the status of the Society's school, what are we to say of the schools which are monthly seeking recognition from the Society?

Why, soon any man who can muster up half-a-dezen testtubes and a spirit-lamp will seek to he recognised as

Professor in the - School of Pharmaey.

The Pharmaey Act of this year has legalised two hranches of the drug trade. Of these, one has very great and distinct privileges, to which the individual members of the branch should he able to show their special claim by high culture and wide scientific attainments. If the individual cannot show his right to a higher status, how can such artificial and nominal distinctions as those between druggist and pharmaeist he maintained?

We have poor inducement to bring up our sons to a career which promises to he only that of a hadly-paid tradesman.

By all means let us have a School of Pharmacy. We want it, and cannot get on without it; but let it he a real school, where something more is contemplated than the passing of an examination.

The Irish Society, under its altered constitution, ought soon to he in a fairly strong financial position, and therefore ahle to take the responsibility of a wider venture in the

educational way.

The Dublin medical schools have all closed their doors to the evening worker, and there is little doubt that a properly equipped school would draw many earnest students from the medical ranks. Here is a grand opportunity, if only those who are responsible will seize it.

I ask the pharmacists of Great Britain to support me in trying to prevent the degradation of pharmacy which must follow on the perpetuation of the present system. It nearly

concerns themselves. I am, Sir,

68 Grafton Street, Duhlin. Faithfully yours, J. E. BRUNKER.

Copper in Cereals.

SIR,—Your correspondent, Mr. William Johnstone, analyst, writes in your last issue a rather alarming letter under the title of the "Prevalence of Copper in Cereals, &c." The statements in the letter are important and interesting to many. Mr. Johnstone finds 15 per cent. of a number of samples of wheat and Seoteh barley to contain copper. It would be interesting to know if 15 per cent. applies equally to the harley as well as the wheat, the source of the samples examined, and the average amount of copper found in them. Would 15 per cent. warrant the heading "The Prevalence of Copper in Cereals, &c."?

We are much indehted to Mr. Johnstone for pointing out its existence in the proportion stated. The information will certainly he novel and important to many proprietors of infants' foods, and the inference Mr. Johnstone draws as to the cause of same, viz., the practice of wheat-dressing with snlphate of copper—makes it also important to many proprietors of wheat-dressing compounds. The importance of the subject, therefore, renders it necessary that Mr. Johnstone's information, if possible, be carefully confirmed.

I am inclined to think his inference as to the cause—dressing seed with cupric sulphate—is wrong. I note Mr. Johnstone finds it particularly in Scotch harley. Experience here is that it is the custom of farmers to dress seed wheat only, and that barley is not dressed. Nor is the ground itself dressed. This is so in the East and South of England. Perhaps some of your Scotch correspondents will report if the custom of dressing seed barley and the ground itself with cupric sulphate exists in Scotland. If not, such information would not point to Mr. Johnstone's conclusion, especially as copper is found also in "peas, heans, &c," which certainly are not dressed.

The custom of dressing seed wheat is one in which farmers generally have great faith, and if Mr. Johnstone's

conclusion is wrong, it would be well to have it shown to be so. The dressing, I know, is not so much employed to stay the ravages of vermin as to prevent the so-called "smut" in wheat. Sulphate of copper is known to be very destructive to micro-organisms, still I, for one, should be glad to obtain more information on the subject-if, in dressing seed wheat with cupric sulphate or other compounds there are really any definite scientific reasons for such a process preventing in a full-grown plant the development of "smut," or whether this is done by farmers in faith and hope that such will be the case, without any certain knowledge that it will prevent it. Information as to the origin and scientific reasons for dressing seed wheat, I hope some of your correspondents may be able to give.

To judge of the possibility of certain of our infants' foods causing some of those "unaccountable and dangerous illnesses" mentioned by Mr. Johnstone, it would seem to be essential to know the amount of copper found in the samples

This letter shows that I am sceptical of the many points in your correspondent's letter.

Yours faithfully,

Colchester, November 27.

W. EDES EVERETT.

Oppenheimer Bros. v. Hair.

SIR,—Our attention has been called to the letter of Messrs. Oppenheimer Bros.' solicitors, in your last issue, complaining of the undue prominence given by your report of this case to the charges of fraud against them made in court by our connsel, Mr. Candy, Q.C. It is natural and right that the solicitors for Oppenheimer Bros. should endeavour to minimise the effect of the charges, but we wish it to understood that we withdrew none of the charges made, and are quite satisfied with the result, having had Messrs. Oppenheimer Bros. under cross-examination.

It is quite true that overtures were made to settle, in deference to the judge's expression of opinion that we should do so, but we declined to withdraw any of the charges. We are sending to all the members of the drug trade a transcript of the evidence and cross-examination of Mr. William and Mr. George Oppenheimer, so we shall leave the public to judge from it whether our charges were or were mot justified. Yours obediently,

London, W.C., December 3. B. W. HAIR & SON.

The Mouse in the Lime-water.

SIR,—Referring to your report of a case heard at the Wandsworth County Court, in the course of which it was alleged that the plaintiff's children had been ill owing to their having drunk of the contents of a bottle of lime water in which was a dead mouse, I should like to mention that the defence was based upon evidence that no bottle containing a dead mouse, or any such thing, was ever bought at the defendant's shop. Evidence was also given that the stage of decomposition of the mouse was so advanced that its presence in the lime-water would not be productive of any such symptoms as were spoken of—animal matter, although poisonous when partially decomposed, not being so when completely decomposed. I would add that notice of application for a new trial has been served, and copy of the judge's notes of the trial applied for. The hearing of the application is fixed for Tuesday next.

I am, Sir, your obedient Servant,

HENRY KERBY.

2 Lancaster Place, Strand, W.C., December 3.

Moonseed-bitters Agreement.

SIR,—Our attention has been called to Mr. Morris's letter in the last issue of your journal, and to the Editorial note you attach to it.

We have signed no agreement with Mr. Powell, but have always been able to obtain his goods without difficulty

Any new agreement his fertile imagination can produce will not serve his end until the enormous stocks be exhausted which he has induced large numbers of retailers throughout the country to receive; even then the same cause will no doubt be in operation to enable us to obtain any

amount of his goods that we may require without agreement,

As for Mr. Powell's statement that he cannot understand where we got the goods, he has already stated to us personally that he is well acquainted with our source of supply, and we believe this latter statement to be strictly accurate.

9 Clerkenwell Road, E.C., Yours faithfully, December 3.

MAY, ROBERTS & Co.

Rank Socialism.

SIR,-Writing in the Nineteenth Century, Mrs Frances Darwin lately made the very fair and sensible proposition that, as servants, when applying for situations, are obliged to furnish satisfactory references from a previous employer, every servant should be canally entitled to require a reference from a previous employé of his prospective employer.

Would not all employés—and, not least, chemists' assistants-do well to avail themselves of this valuable idea?

The present system of requiring references, while furnishing none, may be entirely satisfactory to employers, for by it assistants are completely at their caprice; but is it not an altogether one-sided and, therefore, unfair one?

Education is said to expand the mind, but the pharmaceutical curriculum does not seem entirely to eliminate that ape and tiger part of human nature which Tennyson advises us to "let die"; but, perhaps, some minds require the educational decretions of several generations to bring them to such a purely human standard. "The best of us are," says Pope, "at times what we despise," and even master-chemists are not exempt from this liability to aberrations of honour; and the more valuable an assistant is the more malignant is the resentment of some of them if he wishes to lcave: so that, under the existing system, it is to an assistant's advantage not to make himself too valuable to an employer, who will then experience no reluctance in parting with him, and,

consequently, be more likely to give him a good reference.

On the contrary, if Mrs. F. Darwin's idea were acted upon, the best masters and best assistants would be at once placed

In the course of an experience extending over several years as an assistant, most of the employers with whom I have been associated have certainly always acted as gentlemen in their relations to me-but not all: for I have been threatened with forcible ejection for giving notice by an employer who was overwhelming me with coarse personal abuse; have been dismissed forthwith for asking for a few hours' leave of absence under the most urgent domestic circumstances, though I had saerificed my own time wholesale for my employer's accomodation, and had not had two days' holiday in sixteen months; had my wages withheld to compensate him for his rashness in dismissing me instantly, and when I tried to recover them he denied having dismissed me at once, and threatened me with forfeiture of character and action for damages for having left without noticethough he had twice ordered me to go at once-unless I returned. This employer stated in my reference that I left him abruptly, and kept the chemist with whom I was negotiating waiting four days for references.

If employers had to refer to a previous assistant—which would be mutually fair-it would put the check of selfinterest on masters with whom no other consideration weighs an iota, and enable assistants to warn their brethren that "they also come not unto such places of torment."

Hoping assistants will consider the desirability of bringing about this desirable reform, and, if convinced of its advantage, endeavour to further its adoption,

I am, dear Sir, yours respectfully. FAIRPLAY. (184/30.)

LEGAL QUERIES.

185/47. Saponis.—We cannot give advice on letting rooms. Any house agent will draft the agreement for you.

187/45. R. L. J.—The three years during which you have been "practically engaged in the translation and dispensing of prescriptions" may have been before or after you passed the Preliminary. Gct our Educational number, and make yourself familiar with the conditions.

186/25. F. L.—It is probable that a genuinely-conducted co-operative store could not be fined under the Pharmacy Acts apart from the question of incorporation, as it might be held that they do not keep open shop. Whether the distribution of goods to their constituents is legal "selling" or not we are not prepared to say.

187/22. Jasper.—If the intestate has no children his personal property is divided, a moiety to the widow, and the residue to the nearest of kin of deceased or their representatives. Real property is disposed of lineally.

188/43. R. S. T.—Alpe's "Handy-Book of Medicine-stamp Duty" explains the distinctions whereby these corn-labels become liable or not liable. We should judge that yours would come within the latter class.

189/7. Wholesale.—Strictly it is not legal for an unqualified person to call himself wholesale chemist or manufacturing chemist; but the Pharmaceutical Society have never prosecuted persons who have been bonû-fide in the wholesale trade. They have prosecuted and got penalties in cases where the title was used to cover retail transactions.

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Repeating Prescriptions.

246/12. Liq. Arsen. puts the following case:—A lady consults a physician, who orders a medicine whereby the patient is to take 5 minims of liq. arsenicalis, B.P., three times a day, and is to continue this for four or five months regularly. Would you have any objection to dispensing this, bottle by bottle, for that length of time?

[No objection in the least, provided the medicine does not produce the peculiar effect upon the eyes which is a sign that the dose should be diminished. We have known such a prescription to be dispensed without intermission periodically for thirty years. But some medicines are cumulative, and might do grievous harm if continued for months. It is the duty of the dispenser to advise the patient in such circumstances to see the prescriber occasionally, as a change in the remedy may be desirable.—Ed. C. & D.]

185/5. Enquirer.—A 16-oz. bottle will be required for the mixture seeing that there is over 15 oz. of fluids prescribed; 3s. would be a fair price for the mixture.

A Liniment.

SIR,—In answer to your correspondent "Dispenser," I think he will find the following method of preparing the liniment in question satisfactory:—Rub down the lin. pot. iod. c. sapone in a mortar and add the chloroform and ext. ergotæ liq. (previously mixed) stirring quickly, and send out in a wide-mouthed stoppered bottle, as the best way of preventing the chloroform evaporating.

Yours faithfully, YORKSHIRE. (187/30.)

MISCELLANEOUS INQUIRIES.

Correspondents who ask replies to be inserted "this week" or "next week" are reminded that we do not guarantee replies, and that their insertion depends upon the space at our disposal for such matters. It is generally impossible for us to find room for queries the same week they are received.

183/41. W. A.—Perhaps you mean Dr. Milne Bramwell, of Goole, whose hypnotic experiments are recorded in our issue of April 12, 1890, p. 509.

183/50. Ben Nevis.—Suffolk's "Microscopical Manipulation," 6s. 6d.; Slack's "Pond Life," 3s. 6d.; Lewes's "Seaside Studies," 7s. 6d.; Pritchard's "Infusoria," 2l. 10s.; and Carpenter's "Microscope," 16s. You might find Hillhouse's "Micrographic Dictionary" better for your purpose than Carpenter's, although we like the latter well, perhaps because it is an old favourite.

185/6. Mitre.—We have published a good deal about the effect of pilocarpine on the hair—several notes recently, indeed. See also the DIARY, which you will have in a few days. Consult back numbers.

183/4. Erica—(1) Kletten Würzel Oel (oil of burdock root).—There is a hair-balsam made by Hauschild, of Leipzig, which is a spirituous tincture of the root coloured with indigo. Oil of burdock may be made by digesting 1 part of the powdered drug in 5 parts of olive oil for ten days and filtering. (2) In our issue of July, 1883, there is a very complete article on tobacco. The number is out of print.

182/42. A. H. N.—The Asthma Cigarettes are supposed to be made from cartridge-paper, steeped in a solution of nitre made with a strong decoction of stramonium.

250/35. H. Bach.—It is done by careful fusion of the vulcanised rubber and strong pressure. Without the proper trade appliances you cannot do it.

183/61. Composite.—Carbonate of ammonia would be a suitable powder for selling for composite colours and cuffs.

180/12. X. Y. Z.—Hungary-water. — The formula of this preparation is:—Spirit of lavender and spirit of sage, of each 1 part; spirit of rosemary, 3 parts. Mix. (2) The names of the oils are purely local.

180/66. Lilian—We have not yet met with anything which will remove Tattoo-marks. It is obviously impossible by chemical means to remove a substance from the delicate tissue of the body without materially damaging that tissue, so that the simplest and most effective way to remove tattoo-marks is to cut them out. Few, if any, will submit to that; but we find it difficult to get people to look at the tattoo question in a sensible manner. The marks are solid matter embedded in the flesh. There is no liquid which will dissolve the matter, so that it is quite a hopeless task to search for something else than a knife to remove the marks. Until our knowledge of the subject is extended, we mean to refer future inquirers to this reply.

183/73. Pccafo.—See formula for Mist. Bismuth. Co. in our issue of February 16, 1889, page 248. With this you may mix a solution of pepsin, but you cannot expect the product to be really active as a digestive stimulant.

184/2. Cleon.—The ignition of phosphorus when placed in carbon bisulphide is very unusual. Are you sure that your bisulphide is not exceptionally impure? We expect that there is something in it with which the phosphorus has chemically combined. Hence the ignition.

185/35. Student.—The "Micrographic Dictionary" is the most complete work for vegetable morphology. Martin's "Manual of Microscopic Mounting" is a smaller and cheaper (7s. 6d.) yet reliable book.

184/47. F. Holt.—There is no chemical test for smoke.

187/37. Inh.—See the 1890 DIARY. Steel is corroded by water alone.

. 184/22. Assistant.—The matter is fully discussed in "The Art of Dispensing." Long before ext. tarax. liq. existed there was a succus which was given when liquor taraxaci was ordered.

184/73. Bis. Subnit.—The best way for drying the ingredients for saline is to put them separately in a steam-pan, and stir constantly. The heat should be moderate. For mixing use a machine-sifter. Scale-makers make weighing machines which weigh specified quantities and discharge each quantity into a ready-made packet; but these do not dispense with hand labour, which you must in any case require for 1-drachm packets.

184/53. Fiat Mistura.—(1) The Bell scholarships are for the year following the competition. We do not suppose that the Pharmaceutical Council would permit anyone to postpone the studies a year or two—in fact, the idea is absurd. You may get the questions from the Secretary of the Society.

184/59. Minor.—See the DIARY for 1891.

185/2. D. D. C.—We happen to have the following from "Pax" by the same post as your inquiry:—"I beg to give you the following recipe for A Cement for Stone, &c, which may be of use to some one or other:—Take finely-ground plaster of Paris, and make into the consistency of thin treacle with solution of shellac, and apply at once to the edges of the article to be cemented, as it sets very soon.'

185/56. A Constant Reader.—(1) Guaiacum Lozenges are a preparation of the Throat Hospital Pharmacopeia. Each lozenge contains 2 grains of guaiacum resin, and black-currant paste is the basis. (2) Catarrhine.—We repeat the formula for this, and give the directions, which were omitted from the 1889 DIARY:—

Chlorate of potash 5 oz. Iodide of ammonium 2 draohms Carbolie acid 1 oz. 1 " Camphor 15 ,, Fluid extract of hydrastis ... Sulphate of morphia 20 ,, ½ drachm .. Fluid extract of witch hazel 240 oz. 240 ,, Water

 Δ teaspoonful of this to be given every hour for four doses; then the same quantity every three hours.

The nostrils may be bathed with a lotion consisting of a teaspoonful of the catarrhine in half a teacupful of warm water.

180/61. Ajax.—Silicate of soda is not commonly used in the manufacture of Lubricants. The usual additions to oils and grease for bearings subjected to heavy pressure are soap (which often contains silicate of soda), caustic soda lead, oleate of alumina, and the like. The following are examples of the soda and soap lubricants:—(1) Tallow, 150 parts; palm oil, 100 parts; soda, 25 parts; water 100 parts. (2) Palm oil, 160 parts; soap, 50 parts; soda, 16 parts; water, 540 parts. Boiled until the mixture congeals. (3) Heavy mineral oil, 9 parts; oleate of alumina, 1 part. Silicate of soda is not an expensive article, and is readily obtainable from manufacturers of alkali.

186/6. Syrup. Eastoni.—It is possible that some slight reduction of the phosphoric acid may have occurred in dissolving the iron wire, owing to the coating of tin on the latter, and if this were so the presence of a trace of sulphuric acid in the other ingredients of the syrup would give rise to the odour which you complain of. But we have always found that the sugar is at fault; a slight facing of ultramarine sufficing to give a rather strong odour. Add a little citrie acid to the syrup and warm it gently.

187/35. J. A. W.—The candidate should consult Pereira's "Selecta & Prescriptis," where such matters are fully treated.

185/57 (Quarens) and 264/2 (G. S).—The following formula for Asthma Powder is highly spoken of by Sir Morell Mackenzie, M.D.:—

187/44. Country.—Sleight of hand presumably, but we do not know how the trick is performed.

187/42. Angelique.—Sorry we cannot assist you, as we have never seen the preparation. Try some of the houses who advertise American specialities in the DIARY.

187/32. Liber.—For Learning Spanish, Ahn's grammar is a useful book. Then there are also Sauer's books, among which we may mention C. M. Sauer's "Spanish Conversation Grammar," the key to the same book, Sauer-Röhrich's "Spanish Reader," and (in Spanish) "Diálogos Castellanos." You can get these books at Trübner & Co.'s, Ludgate Hill, E.C. Try to get hold of some Spanish books or newspapers as soon as you are sufficiently advanced. Reading newspapers in the vernacular is one of the best modes of mastering a language.

Information Supplied.

"Periostate."—In your answer to "A. V. (Madrid)" last week you state that "we do not know of any substance called 'periostate.'" "Periodate" is evidently intended. Four or five letters appeared in the *Echo* during August referring to these crystals, and their germicidal action in zymotic diseases. The longest communication was from the maker of the article, and throughout the letter the word was misprinted "periostate." Yours truly,

Mr. J. F. Brown, pharmaceutical chemist, Dover, kindly replies to the following queries:—

180/52. Venice Treacle.—Try Messrs. Herrings, who quote in their list for a kindred preparation, "Confectio Damocratis."

183/10. Electric Lighting.—The cost of a dynamo only, to supply three incandescent lamps of ten-candle power each, begins from 71. This should give an electromotive force of from 30 to 36 volts, and would require 12 to 15 accumulators for storage. Probably it would be most economical to generate the power as wanted, especially if the gas-engine is at liberty in the evening. Fittings can be obtained from Messrs. Cuttriss & Co., Elmwood Works, Leeds; or from Messrs. W. Canning & Co., Great Hampton Street, Birmingham.

TINCTURES AT FAULT.—The Druggists' Bulletin reports the prosecution of some druggists in New Jersey for selling tincture of nux vomica containing less than 1 per cent. of extractive, while the U.S.P. calls for 2 per cent. It is stated that the tinctures were made from Parke, Davis & Co.'s "normal liquid," and it does not appear that the tincture was at all deficient in alkaloid. "For a little while," our contemporary adds, "it looked as though there was a screw loose somewhere. The loose screw happens to be located right in the Pharmacopeial standard. What has extractive matter to do with the therapeutic properties of a tincture of nux vomica? Anyone can add glucose to dilute alcohol, and meet the requirements of the Pharmacopeia. The alkaloids are the only thing that concerns a physician." That is one way of looking at the matter certainly, but there is another.

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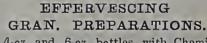
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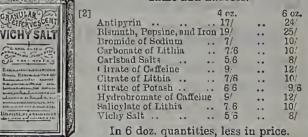
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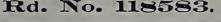
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0						each		per doz.	8/	8	Ladie	s' full 612	e Silver plate	s	each	4,6	per do:	z. 30/
o o		Jaiver	sai	•••	•••	each	1/10	per doz.	*.	9	19	12	plated gauze	C	12	5/	**	32/
0A	• • •	11		•••	• • •	11	1/6	11	12/	10	•		Gold plates		- 11	6		40/
1	Gent'	s Silve	er plated	l wire			2 6	,,	14/	11	11	" ~			"	61	19	- 1
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4	,,	, ,,	plates			77	4	22	24;	13	,,	- "	silver gauze		"	5/	"	32/
5			plated	gauze			4/		26/		11	,,			11	0/	2.7	- 1
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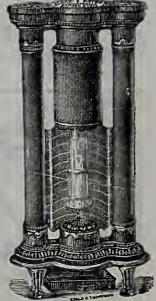


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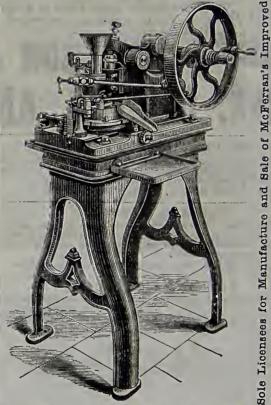
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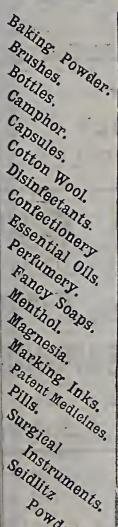
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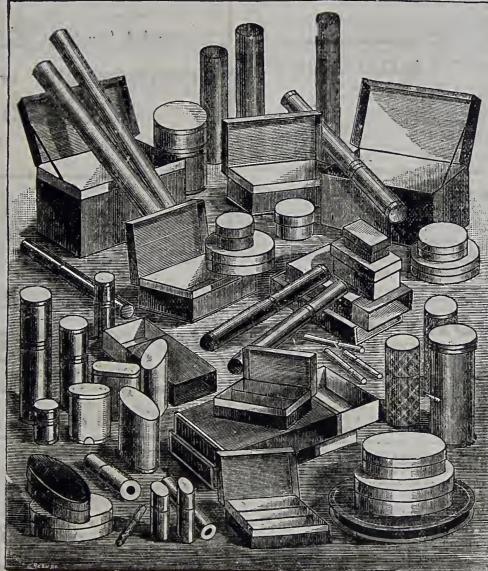
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